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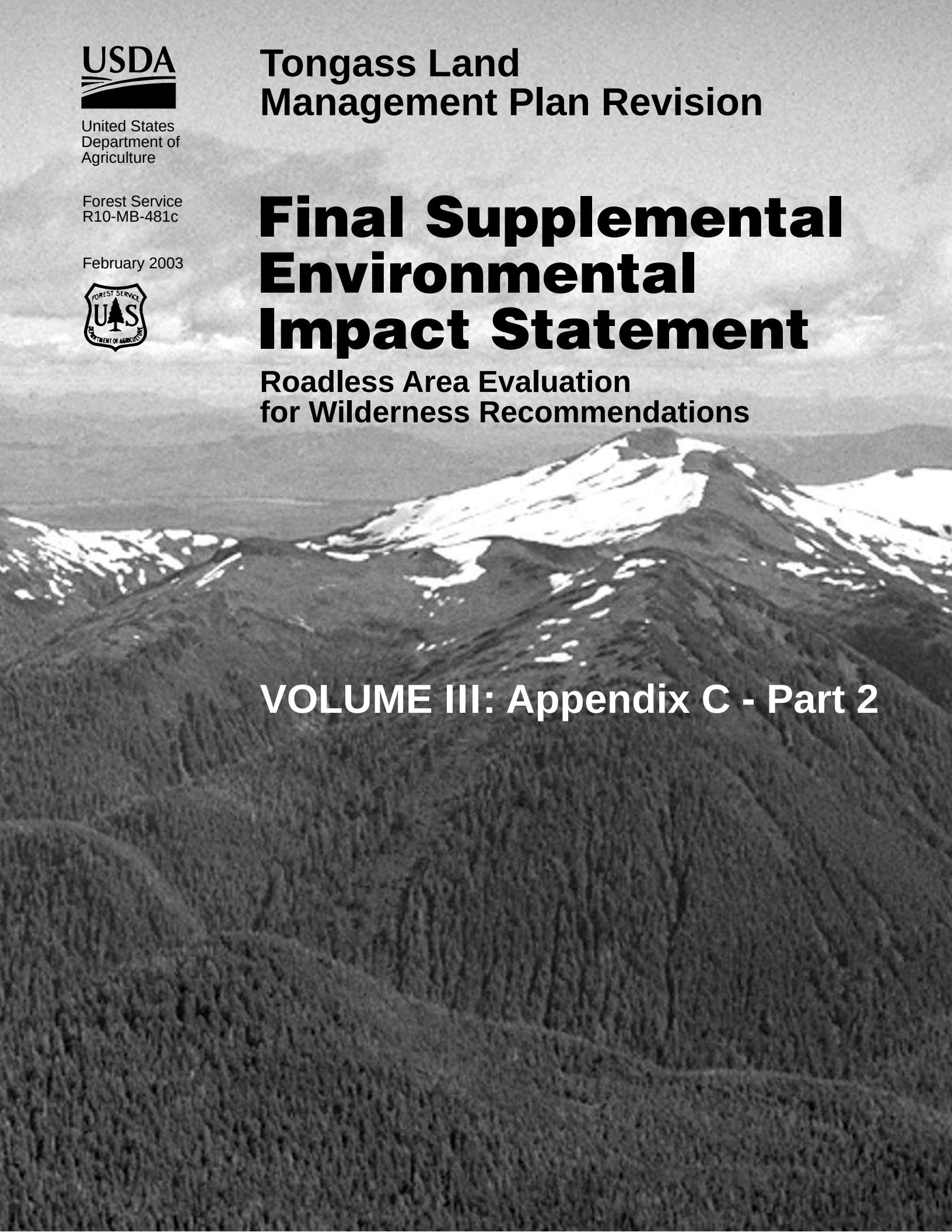
February 2003

Tongass Land Management Plan Revision

Final Supplemental Environmental Impact Statement

Roadless Area Evaluation for Wilderness Recommendations



VOLUME III: Appendix C - Part 2

Tongass National Forest
Land Management Plan Revision

Final
Supplemental Environmental Impact Statement

Roadless Area Evaluation for Wilderness Recommendations

Volume III: Appendix C–Part 2
Roadless Area Evaluation

United States Department of Agriculture
Forest Service–Alaska Region

February 2003

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CONTENTS

Roadless Area	Roadless Area Name	Page
201-310	See Volume II: Appendix C–Part 1	
311	Chichagof	C2-1
312	Trap Bay	C2-22
313	Rhine	C2-33
314	Point Craven	C2-43
317	Point Augusta	C2-54
318	Whitestone	C2-63
319	Pavlof-East Point	C2-72
321	Tenakee Ridge	C2-82
323	Game Creek	C2-92
325	Freshwater Bay	C2-105
326	North Kruzof	C2-116
327	Middle Kruzof	C2-127
328	Hoonah Sound	C2-137
329	South Kruzof	C2-150
330	North Baranof	C2-162
331	Sitka Urban	C2-177
332	Sitka Sound	C2-189
333	Redoubt	C2-200
334	Port Alexander	C2-214
338	Brabazon Addition	C2-226
339	Yakutat Forelands	C2-234
341	Upper Situk	C2-248
342	Neka Mountain	C2-259
343	Neka Bay	C2-271
501	Dall Island	C2-281
502	Suemez Island	C2-292
503	Outer Islands	C2-302
504	Sukkwan	C2-314
505	Soda Bay	C2-324
507	Eudora	C2-335

CONTENTS (Continued)

Roadless Area	Roadless Area Name	Page
508	Christoval	C2-345
509	Kogish	C2-357
510	Karta	C2-368
511	Thorne River	C2-379
512	Ratz	C2-391
514	Sarkar	C2-400
515	Kosciusko	C2-411
516	Calder	C2-422
517	El Capitan	C2-432
518	Salmon Bay	C2-442
519	McKenzie	C2-453
520	Kasaan	C2-465
522	Gravina	C2-482
523	South Revilla	C2-492
524	Revilla	C2-503
525	Behm Islands	C2-514
526	North Revilla	C2-522
528	Cleveland	C2-536
529	North Cleveland	C2-549
530	Hyder	C2-560
531	Nutkwa	C2-569
532	Fake Pass	C2-579
533	Hydaburg	C2-586
534	Twelvemile	C2-594
535	Carroll	C2-604
577	Quartz	C2-613
References Cited		C2-621

ACRONYMS AND ABBREVIATIONS

ADF&G	Alaska Department of Fish and Game
AMS	Analysis of the Management Situation
ANILCA	Alaska National Interest Lands Conservation Act
ATV	all-terrain vehicles
AVA	Alaska Visitors Association
BP	Before Present
EIS	Environmental Impact Statement
EVC	Existing Visual Condition
FAA	Federal Aviation Administration
FEIS	Final Environmental Impact Statement
FERC	Federal Energy Regulatory Commission
HR	U.S. House of Representatives
IFA	Inter-Island Ferry Authority
LCC	Lynn Canal Conservation
LTF	log transfer facility
LUD	Land Use Designation
MA	Management Area
MMBF	million board feet
NEPA	National Environmental Policy Act
NFS	National Forest System
NSRAA	Northern Southeast Regional Aquaculture Association
OHV	off-highway vehicle
ORV	off-road vehicle
P	Primitive
R	Rural
RARE	Roadless Area Review and Evaluation
RM	Roaded Modified
RN	Roaded Natural
RNA	Research Natural Area
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
RVD	recreation visitor day

ACRONYMS AND ABBREVIATIONS (Continued)

SCS	Sitka Conservation Society
SEACC	Southeast Alaska Conservation Council
SEIS	Supplemental Environmental Impact Statement
SIA	Special Interest Area
SPM	Semi-Primitive Motorized
SPNM	Semi-Primitive Non-motorized
TLMP	Tongass Land Management Plan
TUS	Transportation and Utility System
VCU	Value Comparison Unit
VHF	very high frequency
WAA	Wildlife Analysis Area
WARS	Wilderness Attribute Rating System

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Chichagof (311)

ACRES (NFS): 534,310

BIOGEOGRAPHIC PROVINCE: East Chichagof Island and West Chichagof Island

ECOLOGICAL SECTION: Baranof-Chichagof Fjordlands and Northeast Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 25 (20, 22, 23, 25, 26)

I. Overview and Description

(1) Location and Access: The Chichagof Roadless Area is located on Chichagof Island. The area is oriented from northwest to southeast and includes most of the central portion of the island. The area is bordered to the south and southwest by Lisianski Inlet, the West Chichagof-Yakobi Wilderness, Hoonah Sound, and Peril Strait, from Soapstone Cove to False Island. The southeast portion of the area is bordered by areas developed for timber management that extend inland from False Island on Peril Strait and from Little Basket Bay on Chatham Strait. Chatham Strait and non-National Forest System lands border the area to the east.

Developed areas border the southeast portion of the area to the north, extending from Basket Bay/Kook Lake to the Kadashan River. Tenakee Inlet borders the area to the north from the Kadashan River west to Long Bay. Developed areas form the area's north border, west of Long Bay. Cross Sound and South Passage border the area to the northwest.

The towns of Pelican and Elfin Cove, located on Lisianski Inlet and at Port Althrop, respectively, are both located within the Chichagof Roadless Area. Three sites, one at Eight Fathom Bight and the other two at Corner Bay and False Island, are also located near the boundaries of this roadless area and have been used for administrative sites and/or logging camps. Two communities near but not within the roadless area are Tenakee Springs (directly across Tenakee Inlet) and Hoonah (located about 10 miles to the northeast, across Port Frederick). Juneau is approximately 45 miles to the east and is served by the Alaska Highway System and daily jet service.

Access to the Chichagof Roadless Area is via regular or chartered plane service, the Alaska Marine Highway (to Pelican and Tenakee Springs), or by private boat. Floatplane trips to area lakes are common and provide access for work and recreation activities. Forest roads extend along drainages into the roadless area in a number of locations, providing access to the area. Roads also border the area in a number of locations providing access to the edge of the area. Access into the interior is by foot or helicopter.

(2) History: The Tenakee/Hoonah Portage, which is located within the area, has been used since precontact times and is still used today for recreation purposes. Tlingit oral history tells that the portage was found by very early Native people when they observed killer whales swimming across the isthmus. This tale very likely dates back to when this lowland was submerged. The Tenakee/Hoonah portage was commonly used by the Natives for canoe travel. It was used by John Muir in 1880 during his exploration of the area. In the 1920s and 1930s, the Tenakee/Hoonah Portage was commonly used by hand trollers. They traveled in groups and hand-carried their boats across this small piece of land between Port Frederick and Tenakee Inlet.

A stream flows from Kook Lake, disappears underground in spots, and flows from a cave into Basket Bay. This closed-in area was used by Native people to hunt seal and to fish.

At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout the Chichagof Roadless Area.

The Port Althorp area was surveyed by Captain Vancouver in 1794. He also explored and named Port Frederick. Salteries were established at Idaho Inlet in 1884 and at Basket and Saltery Bays in the early 1900s. A salmon cannery, built by Alaska Pacific Salmon Company at Port Althorp, burned in 1940 and was never rebuilt. Some buildings still remain from a large salmon cannery that operated on the west side of Sitkoh Bay until about 1972. These facilities are just outside the boundary of the roadless area.

Homesteads were established at Kadashan Bay in 1915. In 1936, one homestead was established at Idaho Inlet. This homestead, Gull Cove, was a trading post that operated for years. The community of Pelican was established in 1938.

(3) Geography and Topography: Most of this area is very mountainous. The flatter areas are primarily around the estuaries and tidal flats. There are high mountain lakes in the northern portion of the area. Muskeg is found throughout. This roadless area is typical of recently glaciated terrain with rugged mountains dissected by steep-sided, U-shaped valleys and stream courses.

There are many creeks and rivers, lakes, bays, and fiords in the area. Many large lakes, such as Kook Lake, and lake chains, such as those in the Meadow Creek area, are found throughout the roadless area. Streams are generally larger and longer here than on other islands of Southeast Alaska. Major streams include Lisianski, Trail, Kadashan, and Mud Bay Rivers; and Tonalite Creek. Saltwater bays and estuaries are numerous and exhibit much variety. Much of the shoreline is rocky and difficult to access.

Elevations range from sea level to 3,788 feet at the highest point, approximately 1.5 miles north of the mouth of the Lisianski River. Peaks exceeding 3,000 feet are scattered throughout the area. Elevations on the small islands are less, ranging to about 1,160 feet.

There are approximately 342 miles of shoreline on saltwater and 1,452 acres of small islands, 1,940 acres of freshwater lakes, 259 acres of snow and ice, 59,512 acres of alpine tundra, and 67,102 acres of rock.

(4) Ecosystem:

(a) Classification: Biogeographic Province. Approximately 80 percent of the roadless area is located within the East Chichagof Island Biogeographic Province. This province has a dryer and colder climate than the outer coast of Chichagof Island and the winter snow pack is generally greater. Chichagof Island is deeply dissected into three peninsulas that may be functioning biologically more like separate islands. Vegetation in this province represents a modal condition similar to Admiralty Island Province. The remaining 20 percent of the roadless area lies in the West Chichagof Island Biogeographic Province that is dominated by a wet maritime climate. The vegetation is similar to other northern islands.

Ecological Section/Subsection. The Chichagof Roadless Area is contained within the Baranof-Chichagof Fjordlands (M247B) and Northeast Chichagof Fjordlands Ecological Sections (M247C) and is represented by six ecological subsections (see table below). The North Chichagof Granitics Ecological Subsection occupies the majority of the roadless area. It is primarily made up of granitics, though various low-grade metamorphic formations exist. Severe glacial scouring in this subsection left a rough surface with steep valleys, fjords, and numerous depression lakes and ponds. This area has a high proportion of hanging valleys with waterfalls entering salt water. Subalpine meadows and bare rock dominate the elevations greater that 1,500 feet and lower elevations are sparsely covered with spruce-hemlock forests where alluvial fans and colluvial cones are present. Alder and landslide tracks are common. The Peril Strait Granitics Ecological Subsection, which covers a third of the roadless area, is very similar to the North Chichagof Granitics Ecological Subsection; however, hanging valleys are less prevalent and floodplains are broader and better developed allowing increased vegetative success. The Kook Lake Carbonates Ecological Subsection, which covers 7 percent of the Chichagof Roadless Area in the southeastern portion, has a rugged terrain where productive forests are common on carbonate bedrock, alluvial, and colluvial surfaces (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Baranof-Chichagof Fjordlands	North Chichagof Granitics	57%
	Peril Strait Granitics	33%
	Outer Coast Wave-cut Terraces	<1%
	Ushk-Patterson Bay Granitics	<1%
Northeast Chichagof Fjordlands	Kook Lake Carbonates	7%
	Point Adolphus Carbonates	3%

(b) Soils: Soil development in the Chichagof Roadless Area is influenced by high levels of rainfall, cool summer temperatures, a short growing season, and moderately-low soil temperatures. Under such conditions, organic matter decomposes slowly and tends to accumulate in areas where it is being produced or deposited. Because of the high rainfall, the available nutrients can be leached rapidly and exposed mineral soils are subject to erosion.

In general, due to the rapid loss of material by erosion and efficient rainwater runoff, shallow soils with good drainage tend to develop on steeper slopes. Examples of these unstable soil conditions exist from Point Adolphus to Mud Bay and on the ridge west of the Eight Fathom Bight road system. Deep, well-drained soils commonly occur on gentler slopes where transported soil materials have collected.

Deep organic soils (muskegs) tend to develop where drainage is poor. This situation occurs where the soil material fails to provide sufficient internal drainage or where topography prevents external drainage. These areas are generally not well suited for road construction since the soil materials tend to be wet and have low bearing strengths. Drainage improves with increased slope gradient; however, as slopes become oversteepened, soil depths become much shallower. Riparian area soils tend to contain flood-deposited sands and gravels.

(c) Vegetation: Dense western hemlock/Sitka spruce forests dominate the overstory of the Chichagof Roadless Area. The understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Muskegs are dominated by sphagnum mosses, sedges, and shrubs of the heath family, and are interspersed among low-elevation timber stands where drainage is restricted. Trees are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar. Approximately 56,512 acres are alpine tundra vegetation, and 27,712 acres are classed as muskeg. Muskeg is interspersed within other types in units too small to map. Therefore, the acreage for muskeg may be substantially understated.

Common marine plants in the near-shore waters include brown, red, and green algae, and eelgrass. Tideflats are found at the heads of many of the bays and are usually associated with stream estuaries. The tideflats generally support sea milkwort, glasswort, and algae. Beach meadows, like Mud Bay, occur between the shore and the forest. Lower beach meadows are composed of beach ryegrass, reed bent grass, hairgrass, fescue grass, beach lovage, goose tongue, and sedges. Upper beach meadow plants include yarrow, bedstraw, starwort, ferns, western columbine, and cow parsnip. Oregon crabapple, alder, devil's club, and blueberry occur along the border of the beach meadow and the forest.

At elevations above 2,000 feet, the plant communities are generally characterized by low shrubs, grasses, and sedges. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 322,800 acres mapped as forest land of which 173,601 acres or 54 percent are mapped as productive old-growth forest. Of the productive old growth, 62,350 acres or 36 percent are mapped as high-volume old-growth forest. The productive old growth includes about 11,396 acres of high-

volume, coarse-canopy old growth. There are approximately 1,029 acres of second growth forest where beach harvest has occurred in the past.

(d) Fish Resources: Pink, chum, coho, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char occur in the area's lakes and streams (Southeast Chichagof EIS, USDA Forest Service, 1992).

The Kadashan River is recognized as the highest pink salmon producer in northern Southeast Alaska and the third best producer in Southeast Alaska as a whole. This river contains important pink, chum, and coho salmon runs. This river also produces Dolly Varden char and steelhead. The river's estuary is also extremely productive. The streams running into Sitkoh Bay and Seal Bay are also considered high producing streams.

Many streams throughout this roadless area are rated high for salmonid production. These streams include the Mud Bay River, Neka River, Portage Creek, and Chum Creek. The streams running into Sitkoh Bay (both the Sitkoh River and Sitkoh Lake Creek drainages are located mostly in roaded areas near the Chichagof Roadless Area), Seal Bay, Basket Bay, Saltery Bay, Crab Bay, Corner Bay, Long Bay, and North Hoonah Sound are some of the other systems considered high producing streams. Many of these streams provide anadromous trout and char habitat, but the level of production is unknown. In addition to pink and coho salmon, Kook and Sitkoh Lakes contain sockeye salmon and steelhead and cutthroat trout that support important subsistence and sport fisheries.

(e) Wildlife Resources: Diverse wildlife species exist in the Chichagof Roadless Area, including brown bears and Sitka black-tailed deer. Bird and waterfowl rearing and nesting areas are abundant. Bald eagles, goshawk, and marbled murrelets all inhabit this area. There are many areas considered critical deer winter range. An important habitat corridor was identified between the Broad Finger drainage and Crab Bay (Southeast Chichagof Landscape Analysis, USDA Forest Service, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to ten different Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These ten LUDs are Timber Production, Modified Landscape, Scenic Viewshed, Minerals, Transportation and Utility System (TUS), LUD II, Old-growth Habitat, Semi-Remote Recreation, Research Natural Area, and Wild and Scenic River. Both the TUS and Minerals LUDs are secondary LUDs, which overlay the other LUDs.

LUD	Acres
Timber Production	206,681
Modified Landscape	4,918
Scenic Viewshed	4,065
Minerals*	4,699
Transportation and Utility System	NA
LUD II (including LUD II/Wild and Scenic River and LUD II/Research Natural Area)	238,456
Old-growth Habitat	39,507
Semi-Remote Recreation	40,682

* Note that acres in the Minerals LUD are included in the Semi-Remote Recreation LUD acres.

Approximately 40 percent of this roadless area (not including the LUD overlays) was allocated to development LUDs (Timber Production, Modified Landscape, Scenic Viewshed). Approximately 38 percent of this roadless area was allocated to the Timber Production LUD. Along Peril Strait, approximately one percent of the roadless area was allocated to the Scenic Viewshed LUD. The Modified Landscape LUD was assigned to approximately one percent of the roadless area, located primarily around Tenakee Inlet. Approximately one percent of this roadless area was allocated to the Minerals LUD overlay. This roadless area also contains a Potential Power Transmission Corridor that extends along the portion of the Kadashan River in this area. The potential power transmission corridor was assigned to the Transportation and Utility System LUD overlay, which emphasizes potential major public utility systems.

Most of this roadless area, approximately 60 percent, was allocated to non-development LUDs (Old-growth Habitat, Semi-Remote Recreation, LUD II, Research Natural Area, Wild and Scenic River). The roadless area includes 3 of the 12 areas that were allocated to permanent LUD II status under the 1990 Tongass Timber Reform Act. Approximately 44 percent of this roadless area was allocated to the LUD II designation. Much of the lands allocated to LUD II cover the northern end of Chichagof Island along Icy Strait including areas around Point Adolphus, Mud Bay, and Elfin Cove; this area encompasses the Point Adolphus/Mud Bay LUD II area. A substantial portion of LUD II also occurs in the Lisianski River/Upper Hoonah Sound LUD II area. A smaller area of LUD II is concentrated around Kadashan Bay, Kadashan River, and Tonalite Creek, and is called the Kadashan LUD II area. A portion of the area allocated to LUD II was also allocated to the Research Natural Area and the Wild and Scenic River LUDs. Approximately 2 percent of the roadless area, was allocated to Research Natural Area (RNA) and is managed under both RNA and LUD II. This area, the Tonalite Creek RNA, provides opportunities for baseline monitoring of ecological processes and non-manipulative observation, while fulfilling the LUD II management objectives. Along the Lisianski and Kadashan Rivers, approximately 1 percent of the roadless area was allocated to the Wild and Scenic River Designation and is managed under both the LUD II and Wild and Scenic River LUDs. Approximately 8 river miles of the Kadashan River is proposed for designation as a scenic river and 5 river miles of Lisianski River are proposed for wild river designation. The Old-growth Habitat LUD was assigned to approximately 8 percent of the roadless area. Approximately 7 percent of the roadless area was allocated to the Semi-Remote Recreation LUD that includes the small islands associated with the area.

The communities of Elfin Cove and Pelican are located within this roadless area. A total of 50 identified recreation places are located throughout this roadless area, accounting for 319,986 acres of the area. The area includes five trails: an 8-mile-long, unmaintained trail between Lisianski Inlet and North Hoonah Sound; Basket Bay Trail (Trail #451), which extends from Basket Bay to Kook Lake; the Tekanis Trail (Trail #710), which extends from Lisianski Strait to Takanis Bay; the Bohemia Trail; and the Stag Bay Trail. There is a three-sided shelter near Point Adolphus and facilities at Neka Hot Springs.

A number of recreation activities take place within this area, including hiking, dispersed camping, big game hunting, marine viewing, beachcombing, saltwater kayaking, and saltwater shore fishing. Other activities include stream fishing, picnicking, nature study, viewing scenery, small game hunting, lake fishing, flightseeing, waterfowl hunting, beach related waterplay, canoeing, viewing wildlife and fish, powerboat use, gathering of forest products, and cross-country skiing.

Floatplane trips to area lakes are common and provide access for work and recreation activities. There is a great deal of small powerboat use from all surrounding communities including Tenakee Springs, Hoonah, Angoon, Sitka, and Juneau.

There are 11 special use permits in the area for activities such as electronic sites, isolated cabins, an agriculture residence, a resort, a cabin and weir for research studies, and a helicopter site. A number of outfitter/guides permittees use the Chichagof Roadless Area. Outfitter/guide use was reported at 47 locations within this area in 1999. A total of 667 groups and 4,698 clients were reported. Outfitter/guide use activities included hiking, fishing, deer hunting, brown bear hunting, sightseeing, camping, and picnicking. Popular locations included Port Althorp, Idaho Inlet, Mud Bay, Hoonah Sound, and Lisianski River.

There is a shelter at Little Saltery Bay and a hunter's cabin at Crab Bay. There are ten unpatented mining claims in VCUs 240 and 241 (the Lori claims) and ten in VCUs 258 and 260 (the Apex-E1 Nido mine). A hydroelectric power plant is proposed for the Elfin Cove area on the Inian Peninsula.

Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified 43 of the 54 VCUs wholly or partially located within the area as subsistence use areas with a high sensitivity to disturbance.

The 1996 Record of Decision for the Eight Fathom Timber Sale(s) (USDA Forest Service, 1996) proposed additional developments within this roadless area. The 10-year Action Plan for the Tongass National Forest identifies one existing and four future timber sales as part of the Eight Fathom Timber Sale(s) EIS. The existing sale is the Humpback/Gallagher Timber Sale, which is outside the boundaries of the Chichagof Roadless Area. The four proposed sales are expected to take place in 2003 (two projects), 2005, and 2006, and range in size from 2.3 to 9.2

million board feet (MMBF). The two projects proposed for 2002 are expected to involve the harvest of 7.4 to 9.4 and 4.3 to 5.3 MMBF of timber within the roadless area. The Action Plan also includes a future potential timber sale project of about 20 MMBF in the Corner Bay and False Island planning areas. The Finger Mountain Timber Sales Draft EIS (USDA Forest Service, 1999) indicated alternatives with about 11 to 22 MMBF in a planning area located south of Tenakee Inlet. A Final EIS is expected in 2003.

(6) Appearance (Apparent Naturalness): The Chichagof Roadless Area has been modified throughout the years by human influence; however, considering the vastness of the area, the effects have been insignificant. Most of the change has been along the shoreline areas and many of the human occupancy sites are deteriorated and have been overgrown by the forest. The area adjacent to Crab Bay was logged from the beach in the mid-1950s, while the southern drainages of Crab Cove were developed in 1977 and are outside the roadless area. In 1968, Saltery Bay was beach logged and Seal Bay tractor logged. The In-between Timber Sale, harvested in 1983, was located on the headland between these two bays. This sale area is also outside the roadless area. There is also evidence of beach logging in the portion of the area that borders Peril Strait. The communities of Pelican and Elfin Cove are located within the boundaries of the area.

Timber harvest activities in this area are apparent from Tenakee Inlet. The area has an overall natural appearance when viewed from most locations along Hoonah Sound.

(7) Surroundings (External Influences): The following paragraphs summarize the external influences on the Chichagof Roadless Area by region.

The West Chichagof-Yakobi Wilderness: The West Chichagof-Yakobi Wilderness is approximately 65 miles long and averages 8 miles in width. It borders the southwest side of the northwest portion of the roadless area. Although this wilderness is remote, it is frequently used by small boat and plane owners. Many people are drawn to this area by the natural thermal hot springs located in the wilderness. Four public use cabins are also located in the wilderness.

Eight Fathom Bight Area: The Eight Fathom Bight road system is a major external influence adjacent to the roadless area. It extends from the closed Eight Fathom Bight logging camp on Port Frederick, ten miles through the Neka River valley to Otter Lake, and then two miles along Mud Bay River. A lateral road system, approximately 3.5 miles long, is located in the Mud Bay River drainage. Harvest operations, begun in the mid-1970s and completed in the early 1990s, cut timber within .5 mile of either side of the road systems in these drainages.

Salt Lake Bay/Port Frederick/Tenakee Inlet Area: The Salt Lake Bay roaded area and the townsite of Tenakee Springs are located in the Port Frederick-Tenakee Inlet area. Tenakee Inlet and Port Frederick are commonly used by small boats. The Salt Lake Bay area (mostly outside of, but adjacent to the roadless area) contains about 11 miles of road. Harvest operations will continue under the current plans. Operations of the Salt Lake Bay LTF will continue. There is one public recreation cabin at Salt Lake Bay.

Corner Bay Area: The Corner Bay road system and associated developments, located in the northwest part of the Kook Lake road system and extending into the roadless area for approximately 9 miles, were completed in the early 1970s. A logging camp and Forest Service Work Center are located at Corner Bay.

Corner Bay-Kadashan Road System: The Chichagof Roadless Area borders the southern shore of Tenakee Inlet and includes Long, Seal, Saltery, Crab, and Kadashan Bays. The Corner Bay/Kadashan road system connects Kadashan Bay to the Corner Bay logging camp. The cutting units in the Corner Bay/Kadashan area were logged in the early 1960s through the early 1990s. The Operating Plan for the Alaska Pulp Corporation Long-Term Timber Sale proposed a road to connect the Kadashan road with the Sitkoh Bay/False Island road system. After 8 miles of this road were built, construction was halted by litigation.

Peril Strait: The Chichagof Roadless Area lies along Peril Strait for 28 miles. There is evidence of beach logging in much of the area. A drainage northwest of Moore Mountain was developed in the mid-1970s, and is referred to as Oly Creek. The southeast corner of the Chichagof Roadless Area is surrounded by the False Island/Sitkoh Bay/White Rock road system.

Basket Bay-Kook Lake: The roadless area borders Chatham Strait for about 4 miles. Located within this area are Little Basket Bay, Basket Lake, the eastern and southern shorelines of Kook Lake, and the southern shoreline of Basket Bay. The Corner Bay/Kook Lake road system and harvest units form the northeastern boundaries of the Chichagof Roadless Area. Construction of the Kook Lake road has been completed past Basket Bay and along Chatham Strait up to the edge of the Trap Bay watershed.

These developed areas are visible from locations within the roadless area and may affect the perceived naturalness and scenic values of these locations. These potential effects are, however, limited to locations in relative proximity to these external influences. A large portion of this extensive roadless area is unaffected by development in adjacent areas.

The sights and sounds of motorized boats are also evident from some locations within the area. Small aircraft overflights for recreation access and service to the various communities and camps in the general vicinity are also apparent on occasion. These occur primarily over the coastal zone and along the major valleys. There are several daily, commercial, high-altitude overflights, primarily to the south of the roadless area, or to the north over Icy Straits. Small boats use most of the coastal waters for commercial or sport fishing and hunting access. The Alaska Marine Highway ferries use Peril, Chatham, and Icy Straits, and Cross Sound.

(8) Attractions and Features of Special Interest: The area contains 50 inventoried recreation places, which cover 319,986 acres (60 percent) of the roadless area. The northern portion of the Chichagof Roadless Area contains several high alpine lakes used for fly-in fishing trips. The lakes, originally stocked in the 1930s, provide a unique recreation opportunity. Big game hunting occurs in all parts of the roadless area.

The Kadashan area and the area between Lisianski Inlet and North Hoonah Sound are of special interest because they contain two intact Sitka spruce old-growth ecosystems outside of wilderness on the northern half of the Forest. These groves, between 400 and 500 years old, are considered to have high fish and wildlife values.

Tenakee/Hoonah Portage is a .25-mile-long piece of land that separates Tenakee Inlet from Port Frederick. A trail, laid with sticks at the portage, is a special feature that allows people to push their skiffs and kayaks over the portage. The State has recently acquired the land along the portage.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of the area changed in four main ways between 1989 and 2003. First, most of the area east of the Neka River that was part of the Chichagof Roadless Area in 1990 is now part of the Neka Mountain (#342) or Neka Bay (#343) Roadless Areas. Second, Lemesurier Island and the Inian Islands are no longer part of the Chichagof Roadless Area. They are now part of the Pleasant-Lemesurier-Inian Wilderness. Third, a number of beach-logged areas, excluded from the 1989 area, are included within the 2003 area. Fourth, several smaller areas were excluded from the roadless area between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

II. Capability of Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The Chichagof Roadless Area is unmodified except for isolated areas. Most of the change has been along the shoreline areas and many of the human occupancy sites are deteriorated and have been overgrown by the forest. Beach logging has occurred along Crab and Saltery Bays and the intervening headland. There is also evidence of beach logging in the portion of the area that borders Peril Strait. Additional beach logging is evident in Salt Lake Bay, Eight Fathom, and Port Frederick. Developed areas located within, but excluded from, this roadless area include the roads and harvested areas at Kadashan Bay, mining operations on private land at Cape Bingham/Mite Island, and the communities of Pelican and Elfin Cove. In addition, the area is bordered in a number of locations by developed areas. These impacts although locally evident, have a low overall effect on the natural integrity of the area. Both the relative size of the developments and their shoreline or drainage locations contribute to this low impact. Overall, the area has very high natural integrity and apparent naturalness and is suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The opportunity for solitude and primitive recreation in the Chichagof Roadless Area is very high to outstanding. There are no impacts from humans over the vast majority of the area. The proximity of the Chichagof Roadless Area to the West Chichagof-Yakobi Wilderness enhances the opportunity for solitude and primitive recreation. This area can be accessed by boat or by plane, or may be accessed by foot from one of several adjacent road systems.

Outfitter/guide use was reported at 47 locations within this area in 1999. A total of 667 groups and 4,698 clients were reported. Outfitter/guide use activities included hiking, fishing, deer hunting, brown bear hunting, sightseeing, camping, and picnicking. Popular locations included Port Althorp, Idaho Inlet, Mud Bay, Hoonah Sound, and Lisianski River.

Recreational use occurs around Kadashan Bay from the Kadashan/Corner Bay road system and the associated facilities. The road system is not continuously used and solitude is broken only when use is occurring.

There is, and would continue to be, interruption to the solitude around the townsites of Pelican and Elfin Cove. These interruptions would increase around the patented mines, should they come into production.

Small aircraft overflights for recreation access and service to the various communities and camps in the general vicinity are also apparent on occasion. This use occurs primarily over the coastal zone and along the major valleys. There are several daily, commercial, high-altitude overflights. These flights are primarily nearer to the south part of the roadless area, or to the north over Icy Straits. Small boats use most of the coastal waters for commercial or sport fishing and hunting access. The Alaska Marine Highway ferries use Peril, Chatham, and Icy Straits, and Cross Sound. All of these activities provide interruption to solitude; however, they are transitory and short term in nature.

The Chichagof Roadless Area provides primarily primitive and semi-primitive non-motorized opportunities. However, because of existing use patterns, it is evident that both off-road and highway vehicles use portions of the area. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	126,336	24%
Semi-Primitive Non-Motorized (SPNM)	264,951	50%
Semi-Primitive Motorized (SPM)	29,508	6%
Roaded Natural (RN)	371	0%
Roaded Modified (RM)	112,585	21%
Rural (R)	104	0%

The area contains 50 inventoried recreation places, which cover 319,986 acres (60 percent) of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	11	27,930
SPNM	11	163,024
SPM	22	23,730
RN	2	371
RM	19	104,930
R	0	0

* Recreation Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Recreation Places.

There are five trails located in the roadless area. Cabins are located in adjacent areas at Salt Lake Bay, White Sulfur Springs, Goulding Lake, Kook Lake, two at Sitkoh Lake, and a three sided shelter in the Point Adolphus area. There are also facilities at Neka Hot Springs.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The Chichagof Roadless Area was given a rating of 26 out of a possible 28. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 25.

In order to examine the wilderness attributes of individual portions of this large roadless area, it was divided into six sub-areas and each was rated separately. The larger LUD II areas (Pt. Adolphus/Mud Bay and Lisianski River/Upper Hoonah Sound) were rated together as a separate area and received a score of 26. The smaller LUD II area (Kadashan) was also rated separately and received a score of 23. The non-LUD II area north of the portage at the head of Tenakee Inlet was rated 22. The non-LUD II area from the portage to the east side of Seal Bay was rated 26. The non-LUD II area from Seal Bay to the Kadashan LUD II rated 23. The non-LUD II area east of the Kadashan LUD II rated 20.

(4) Ecologic and Geologic Values: The Chichagof Roadless Area, centrally located on Chichagof Island, is not part of a larger roadless area, which includes the adjacent Roadless Area 342 and the West Chichiagof-Yakobi Wilderness.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed 6 of the 47 VCUs in this area as primary salmon producers, 3 as non-producers and the balance as secondary producers. It listed 5 of the VCUs as primary sportfish producers (ADF&G, 1998).

Primary Salmon Producer	VCU #	Primary Sportfish Producer	VCU #	Non-Producer	VCU #
Seal Bay	229	Mud Bay	193	Elfin Cove	187
Kadashan River	235		1931	Point Adolphus	195
Sitkoh Bay	243	Neka Bay	201		
False Island	245	Kadashan River	2351	Apex-El Nido	260
Lisianski River	249	Kook Lake	239		
Lisianski Ridge	262				

Pink, chum, coho, and sockeye salmon, cutthroat and steelhead trout, and Dolly Varden char occur in the area's lakes and streams (Southeast Chichagof EIS, USDA Forest Service, 1992).

The Kadashan River is recognized as the highest pink salmon producer in northern Southeast Alaska and the third best producer in Southeast Alaska as a whole. This river contains important pink salmon runs and also produces Dolly Varden char, chum salmon, and steelhead. The estuary for the river is also extremely productive. The streams running into Sitkoh Bay and Seal Bay are also considered high producing streams.

Many streams throughout this roadless area are highly rated for salmonid production. These streams include the Mud Bay River, Neka River, Portage Creek, and Chum Creek. Streams noted for their coho salmon producing ability are the three streams running into Crab Bay, and the streams at the heads of Long Bay and North Hoonah Sound. Many of these streams provide anadromous trout and char habitat, but the level of production is unknown.

(b) Wildlife Resources: Diverse wildlife species exist in the Chichagof Roadless Area and include brown bears and Sitka black-tailed deer. Bird and waterfowl rearing and nesting areas are abundant. Some of the most noted are Mud Bay and Goose Island. Bald eagle habitat, including nesting and roosting trees, is found along the shorelines. Goshawk nests have been identified in Sitkoh Bay in the past, and have been occupied in recent years. The area is also heavily used by marbled murrelets, but a nest survey has not been conducted (Southeast Chichagof Landscape Assessment, USDA Forest Service, 1999). North Hoonah Sound and Mud, Long, Seal, Saltery, Crab, and Kadashan Bays are good examples of high quality brown bear habitat. The Kadashan River corridor also supports large populations of brown bear and deer. The north end of Hoonah Sound is also desirable seal habitat.

The Kadashan River drainage has been identified as key deer winter range. Other areas designated as critical deer winter range include all of Goose Island, along the shoreline and estuary of Mud Bay, all around the lake system northeast of Mud Bay, all of the area around Tenakee/Hoonah Portage, Corner Bay, the Basket Bay area including Kook Lake, intermittently along the Peril Strait shoreline, and the heads of North Hoonah Sound and Lisianski Inlet.

Based on harvest data compiled from 1985 to 1995, three of the VCUs in the area were ranked in the first 25 percent of brown bear harvest areas on the Tongass. Twelve other VCUs in the area were ranked in the second 25 percent (ADF&G, 1998).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Migrating Peale's peregrine falcons pass through the forests during its spring and fall migration flights. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, twelve sensitive plant species are known or suspected to occur in the Sitka Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are extensive karst resources in this roadless area, encompassing 21,231 acres, or 4 percent of the area. Two-thirds of the karst resources are classified as high vulnerability harst. There are no known glaciers or unique geologic features in this area. The Neka Hot Springs is located in the area. There are reported hot springs at the head of the North Arm of Hoonah Sound.

(5) Scientific and Educational Values: The mouth of Basket Bay has formations of gray, gray and white, white, dark blue, and black marble. The Tonalite Creek Research Natural Area, located in the Chichagof Roadless Area, was identified as including pristine examples of Sitka spruce, western and mountain hemlock, and yellowcedar forest types; productive bear and fisheries habitat; and muskegs (USDA Forest Service, 1997). This area was allocated to Research Natural Area in the 1997 Tongass Land Management Plan Revision and is also located within the designated LUD II.

The city of Sitka, the closest larger community, is located approximately 30 air miles south of the area. Therefore, this area is relatively inaccessible to large numbers of school-age children. The area is more accessible to school-age children residing in the communities of Pelican and Elfin Cove and other nearby communities, such as Hoonah.

(6) Scenic Values: The visual character type of this area is Admiralty-Chichagof. Landforms are generally rounded, but include steep, rugged mountains on the west side of the roadless area. These mountains are snowcapped much of the year. Rocky shorelines, interspersed with gravel beaches, are found along most of the coast. Streams are often short and swift, flowing directly to saltwater. However, some of the largest and longest of the Southeast Alaska island rivers are also found here. Bays and estuaries are common and show a wide range of visual characteristics. Other significant water features include large lakes and lake chains. Lower slopes are densely vegetated and are interspersed with muskeg and small lakes. Upper slopes appear bare from a distance, but often contain muskeg, alpine tundra vegetation, and scattered tree cover.

The Chichagof Roadless Area has been modified throughout the years by human influence. Most of the change has been along the shoreline areas and many of the human occupancy sites are deteriorated and have been overgrown by the forest. The area adjacent to Crab Bay was logged from the beach in the mid-1950s. In 1968, Saltery Bay and Seal Bay were beach logged. There is also evidence of beach logging in the portion of the area that borders Peril Strait, Port Frederick, and along Tenakee Inlet.

A number of developed areas border this roadless area. There are also a number of similarly developed areas located within, but excluded from the roadless area. These include the Eight Fathom Bight/Neka River and Kadashan Bay areas, mining operations on private land at Cape Bingham/Mite Island, and the communities of Pelican and Elfin Cove. Overall, these impacts within or adjacent to the area, although locally evident, have a low overall effect on the natural appearance of the area. Both the relative size of the developments and their shoreline location contribute to this low impact. Timber management activities are apparent from Tenakee Inlet. The area has an overall natural appearance when viewed from most locations along Hoonah Sound.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include:

- Alaska Marine Highway and Tour Ship Routes: Peril Strait, Icy Strait, Lisianski Inlet, Cross Sound, South Passage, South Inian Passage, Port Frederick, and Tenakee Inlet.
- Recommended Wild, Scenic and Recreational Rivers: Kadashan River and Lisianski River.
- Small boat routes: Icy Strait, Peril Strait, Chatham Strait, South Passage, Idaho Inlet, Mud Bay, Port Frederick, Elfin Cove, Port Althorp, Cross Sound, Lisianski Inlet, Hoonah Sound (north and south arms), Tenakee Inlet, Corner Bay, Tenakee Inlet via Portage, Pinta Cove, Lisianski Strait, Stag Bay, Kadashan Bay, Crab Bay, Seal Bay, Long Bay, and Soapstone Cove.
- Saltwater use area: Neka Bay.
- Dispersed Recreation: Three Hill Island, Point Adolphus, Lisianski River, Mud Bay, Neka River, Kadashan Bay, Port Frederick Portage, Long Bay, Tenakee Inlet (South Tidal Flats), Seal Bay, Port Althrop, and Kook Lake.
- Communities: Tenakee Springs, Pelican, and Elfin Cove.
- Hiking Trails: Basket Bay (451), Lisianski (506), Tekanis (710), Bohemia, and Stag Bay.
- Boat Anchorages: Port Althrop, Soapstone Cove, Lisianski Inlet, Mud Bay, Neka Bay, Tenakee Inlet (north extent), Corner Bay, Crab Bay, Seal Cove, Long Bay, Gull Cove, Goose Island, Elfin Cove, Salt Chuck Bay, Pinta Cove, Idaho Inlet, Stag Bay, and the Shaw Islands.

The roadless area is inventoried as approximately 15 percent Variety Class A (possessing landscape diversity that is unique for the character type), 59 percent Variety Class B (possessing landscape diversity that is common for the character type), and 26 percent Variety Class C (possessing a low degree of landscape diversity).

The majority of the area, 93 percent, is inventoried in Existing Visual Condition (EVC) I, which appears untouched by human activity. Approximately one percent of the area is inventoried as EVC III, which are areas in which changes in the landscape are noticed by the average person, but they do not attract attention. Another 1 percent of the area is in EVC IV, where changes in the landscape are easily noticed by the average visitor, and may attract some attention. EVC V, in which changes to the landscape are obvious to the average visitor, accounts for about 3 percent of the area.

(7) Social, Cultural, and Historical Values: The Tenakee/Hoonah Portage has been used since precontact times and is still used today for recreation purposes. Tlingit oral history tells that the portage was found by very early Natives when they observed killer whales swimming across the isthmus. This tale very likely dates back to when this lowland was submerged. The Tenakee/Hoonah portage was commonly used by the Natives for canoe travel. It was used by John Muir in 1880 during his exploration of the area. In the 1920s and 1930s, the Tenakee/Hoonah Portage was commonly used by hand trollers. They traveled in groups and hand-carried their boats across this small piece of land between Port Frederick and Tenakee Inlet.

A stream flows from Kook Lake, disappears underground in spots, and flows from a cave into Basket Bay. This closed-in area was used by the Alaska Native peoples to hunt seal and to fish. The Port Althorp area was surveyed by Captain Vancouver in 1794. He also explored and named Port Frederick.

At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout the Chichagof Roadless Area.

Salteries were established at Idaho Inlet in 1884 and at Basket and Saltery Bays in the early 1900s. A salmon cannery, built by Alaska Pacific Salmon Company at Port Althorp, burned in 1940 and was never rebuilt. Homesteads were established at Kadashan Bay in 1915. In 1936, one homestead was established at Idaho Inlet. This homestead, Gull Cove, was a trading post that operated for years. The community of Pelican was established in 1938.

The communities of Pelican and Elfin Cove are located within the roadless area. Tenakee Springs and Hoonah are located 4 miles north and 8 miles northeast of the area, respectively. Sitka, the closest larger community, is located approximately 35 air miles south of the area.

Outfitter/guide use was reported at 47 locations within this area in 1999. A total of 667 groups and 4,698 clients were reported. Outfitter/guide use activities included hiking, fishing, deer hunting, brown bear hunting, sightseeing, camping, and picnicking. Popular locations included Port Althorp, Idaho Inlet, Mud Bay, Hoonah Sound, and Lisianski River.

Subsistence use occurs in the area. Parts of the area are important subsistence use areas for Elfin Cove, Hoonah, Pelican, and Tenakee Springs. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified 38 of the 47 VCUs located within the area as subsistence use areas with a high sensitivity to disturbance. Eleven of the VCUs located within this area were included among the VCUs with the highest community use value. Areas identified by ADF&G in their comments on the Tongass Land and Resource Management Plan EIS (1997) included four VCUs in their second tier of highly valued community use areas, with two other VCUs included in the third tier (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: Manageability as wilderness is very high. Most boundaries are defined by the coastline or are not critical because they adjoin wilderness. Other parts of the area are bordered by developed areas. The effects of most current activities in adjoining areas are minimal because such activities, which are typically saltwater-based or wilderness related, are transitory. While activities associated with road construction and timber harvest operations are highly distracting, they affect a relatively small proportion of the area. Past activities have affected the natural integrity of parts of the area but they have provided better access into the interior of the roadless area via an existing road system. Designating the Chichagof Roadless Area Wilderness would complement and extend the West Chichagof-Yakobi Wilderness. The proximity of the West Chichagof-Yakobi Wilderness enhances the wilderness character of the Chichagof Roadless Area, in particular related to the potential for solitude and primitive recreation opportunities.

Exceptions to the ease of manageability as wilderness would be in those areas where the boundaries are man-made and do not follow natural features. These areas, which comprise only a small portion of the total length of the area's boundary, include all private ownerships such as at Cape Bingham/Mite Cove, private parcels at Mud Bay, and the lands at Pelican, Elfin Cove, Port Althorp, and Bohemia Basin. All other non-federal ownerships are very small and offer no problems for manageability as wilderness. The recent conveyance of lands along the Tenakee/Hoonah Portage, have isolated a small area east of the portage. The small size and degree of development adjacent to this two-lobed area make it not suitable for wilderness. These small areas were excluded from the roadless area between the Draft and Final SEIS.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: This area has high potential for future recreation use. Freshwater fishing use of the high mountain lakes in the northern portion of the Chichagof Roadless Area will likely increase. Outfitter/guide use will probably increase throughout the area, especially around Elfin Cove, Neka Bay, Pelican, and Lisianski Inlet and Strait. Access will be mainly by boat.

In 1996, the Alaska Visitors Association (AVA) proposed the following recreation developments for the Hoonah Sound-Lisianski Pass area: hut to hut hiking for 25 persons, a day-use and an overnight wildlife observatory for 50 persons. They proposed trails/boardwalks and small cruiseship shorewalks in Three Hill Island, Gull Cove, and Idaho Inlet. They also proposed recreation developments at Basket Bay and a small cruiseship shorewalk along Tenakee Trail.

Public scoping performed by the Sitka Ranger District reported in the Southeast Chichagof Landscape Analysis (USDA Forest Service, 1999) indicated a desire by Tenakee Springs residents for construction of a survival shelter in Seal Bay.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: The Tongass Land Management Plan Revision EIS (USDA Forest Service, 1997) indicated that incubation boxes were scheduled to be installed on Mud Bay River. A weir on Kadashan River was discontinued by the ADF&G in 1987. Currently, some adult coho are being collected at Kadashan River, incubated at the Medvijie Hatchery in Sitka, and then stocked into the Indian River near Tenakee Springs to build up a coho run there. Fish passage was constructed around the barrier falls near tidewater at the Indian River in 1998 and 1999. Stocking is planned to occur for 3 to 4 years until a coho salmon run is established.

(4) Wildlife Resources: No wildlife habitat enhancement projects are identified at this time.

(5) Timber Resources: There are 173,601 acres mapped as productive old growth in the roadless area. In addition, approximately 1,029 acres of second growth have resulted from beach logging activities. Of these acres, 53,380 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), approximately 11,164 acres (2 percent) of this roadless area are estimated to be suitable for timber production. Approximately 2,807 of the suitable acres are mapped as high-volume old growth; of these acres, 262 are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area is good in those areas with operable timber stands. The larger areas of mature/overmature timber that are operable and accessible, combined with the existing road systems and log transport facilities in the vicinity, makes timber management feasible in those areas.

The 1996 Record of Decision for the Eight Fathom Timber Sale(s) (USDA Forest Service, 1996) proposed additional developments within this roadless area. The 10-year Action Plan for the Tongass National Forest identifies one existing and four future timber sales as part of the Eight Fathom Timber Sale(s) EIS. The existing sale is the Humpback/Gallagher Timber Sale, which is outside the boundaries of the Chichagof Roadless Area. The four proposed sales are expected to take place in 2002 (two projects), 2005, and 2006, and range in size from 2.3 to 9.2 million board feet (MMBF). The two projects proposed for 2002 are expected to involve the harvest of 7.4 to 9.4 and 4.3 to 5.3 MMBF of timber within the roadless area. The Action Plan also includes a future potential timber sale project of about 20 MMBF in the Corner Bay and False Island planning areas. The Finger Mountain Timber Sales Draft EIS (USDA Forest Service, 1999) indicated alternatives with about 11 to 22 MMBF in a planning area located south of Tenakee Inlet. A Final EIS is expected in 2003.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: In 1984, several areas within the Chichagof Roadless Area were identified as having a high potential for development of locatable minerals. These include the area from Idaho Inlet east to the edge of the area, along the east and southwest shore of Lisianski Inlet, and all of the north shore of Peril Strait and the south shore of Tenakee Inlet. Mineral development potential is also high along the west shoreline of Lisianski Inlet and similar potential exists just south of this shoreline. Several mining operations, including the Apex and Bohomia mines, have occurred or are occurring presently within the Chichagof Roadless Area.

This area contains 8,802 acres of land identified as a mineral activity tract having a high to moderate potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service,

1991). A total of 4,699 of these acres are allocated to the Minerals LUD. The Minerals LUD is intended to encourage the prospecting, exploration, development, mining, and processing of locatable minerals in areas with the highest potential for minerals development. This is to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when minerals developments occur. In addition, this area contains 108,988 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 12,698 of these acres are considered to have a relatively high potential for development.

(8) Transportation and Utilities: A potential power transmission corridor that extends along the portion of the Kadashan River in this area was assigned to the Transportation and Utility System LUD in the 1997 Tongass Land Management Plan Revision. There are no current plans for this corridor, which is part of the future power grid for communities of Southeast Alaska. Other local roads, primarily to support timber management activities, would be needed to access those areas that have suitable timber and are available for development under the Forest Plan.

(9) Water Availability and Use: The Elfin Cove and Pelican communities are located within this roadless area and create a demand for water. A hydroelectric power plant is proposed for the Elfin Cove area on the Inian Peninsula.

(10) Areas of Scientific Interest: The Kadashan area and the area between Lisianski Inlet and North Hoonah Sound are of special interest because they contain two intact Sitka spruce old-growth ecosystems outside of wilderness on the northern half of the Forest. These groves, between 400 and 500 years old, are considered to have high fish, timber, and wildlife values.

The Tonalite Creek Research Natural Area contains pristine examples of Sitka spruce, western and mountain hemlock, and yellowcedar forest types, productive bear and fisheries habitat, and muskegs. Management as wilderness may restrict the research activities.

There are extensive karst resources in this roadless area, encompassing 21,231 acres (4 percent) of the area. Neka Hot Springs is located in the area. There are reported hot springs at the head of the North Arm of Hoonah Sound.

(11) Land Use Authorizations: There are 11 special use permits in the area for activities such as electronic sites, isolated cabins, an agriculture residence, a resort, a cabin and weir for research studies, and a helicopter site. A number of outfitter/guides permittees use the Chichagof Roadless Area. The Forest Service uses two radio repeater sites within the area.

(12) Land Status: All land within the roadless area is part of the National Forest System. There are several locations of encumbered lands within the roadless area, including areas on the Inian Peninsula, upper Tenakee Inlet, and adjacent to land owned by Sealaska Regional Corporation in the east.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: People from the surrounding towns and logging camps use this roadless area. These population concentrations include Pelican, Elfin Cove, Hoonah, Gustavus, Tenakee Springs, Eight Fathom Bight, Corner Bay, Juneau, Sitka, and Angoon. It is possible to access the area by most methods of transportation, including boats, all-terrain vehicles, and planes. Use from outfitter/guides occurs throughout the area. Subsistence uses take place throughout most of the area and include hunting, fishing, and gathering.

Each community has its own emphasis issues. Elfin Cove, Pelican, and Tenakee Springs would like to see roading and logging techniques now being used changed so the impacts to the land are not so great. They would also like to see a change to the amount of logs being taken off the land. Hoonah's opinions vary. They would like to see a sustained cut for economic reasons, but would also like the land protected for subsistence use and protection of the Alaska Native way of life. There has been opposition to logging the Kadashan drainage from the communities of Tenakee Springs, Juneau, and Sitka. They advocate leaving it

in a natural state because of the many complete ecosystems and the number of years the drainage has been used as a research area.

Local issues include the continuing harvesting and roading of the area, the continuation of jobs in the local area, the effects of logging on fisheries and wildlife habitat, maintaining the visual quality of high-interest areas, maintaining lifestyles, the location of log transfer facilities, the distribution of harvest volume classes, and the tradeoffs between environmental protection measures and the economics of harvest activities.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas on the Tongass National Forest as wilderness. Three separate parts of the Chichagof Roadless Area were proposed as wilderness areas. These three areas were identified as Kadashan River, Point Adolphus-Mud Bay Wilderness, and Chichagof Wilderness. In 2001, HR 2908 identified the majority of the area that is not already allocated to LUD II as a proposed LUD II addition. This bill requested that the areas currently allocated to LUD II remain under this allocation, with the exception of the LUD II area surrounding the Kadashan River, which was identified as a proposed wilderness addition. The bill identified Kadashan River, Tonalite Creek, and a number of major streams in the area for protection as wild and scenic rivers. It also proposed that part of the headland between Saltery and Crab Bays be protected as a Special Management Area.

(c) Public Input During Forest Plan Revisions and Appeals: This area was addressed in public input received during the Forest Plan revision and appeal. Many specific areas on Chichagof Island were identified for non-timber allocations or simply for "protection." Recreation and subsistence values, wildlife habitat, and scenic quality were cited most often as reasons. The scenic qualities of Chichagof Island in general were mentioned as very important to the tourism, tour boat, and guide service industries. Areas mentioned by name included Hoonah Sound, the Kadashan drainage, Lisianski Inlet, and Upper Tenakee. A minority of commenters asked for logging or road building in some of these same areas.

Many commenters (including the City of Tenakee Springs, Taku Conservation Society, Juneau Sierra Club, National Audubon Society, and Tenakee Fish and Game Advisory Board) stated that the important scenic, wildlife, fishing, and (especially) subsistence values and habitats of Tenakee Inlet, which borders much of the area to the north, must be protected. They felt that the area has many natural values warranting protection and that there is much public support for protection and reducing timber harvest. Specific areas mentioned as needing protection by name included the drainages of Seal and Long Bays (which have some of the highest concentrations of deer in the Tongass), Goose Flats, and all important deer wintering habitat in Crab and Saltery Bays.

The Sitka Conservation Society identified the Hoonah Sound to Sitka ferry route, including Peril Strait, which partially borders the Chichagof Roadless Area to the south, as "the heart of Sitka's economy and lifestyle" and asked that Recreation LUDs be applied.

Commenters, including the city of Tenakee Springs and the Southeast Alaska Conservation Council (SEACC), were strongly opposed to any utility or transmission corridors, powerlines or roads being built through the Kadashan drainage because this type of corridor is inconsistent with the reasons that the area was designated as LUD II. Timber industry interests felt that the road should be completed to provide a connected road system for recreation and timber access and allow more economic management of the area.

Non-timber prescriptions or LUDs (most commonly Remote or Semi-remote Recreation) were favored for the Lisianski Inlet and Strait area, especially around Lisianski Inlet and River. Important subsistence values, wildlife habitat, fishing and recreation (including a kayak route) and scenic quality (both for locals and tourists) were cited as reasons. The Soapstone area was identified as an important anchorage and kayak destination that required protection. Protection was requested from logging in Idaho Inlet. The community of Elfin Cove stated that the maintenance of the LUD II area was of the utmost importance to the community.

The AVA proposed the following recreation developments for the Hoonah Sound-Lisianski Pass area: hut to hut hiking for 25 persons, a day-use and an overnight wildlife observatory for 50 persons. They proposed trails/boardwalks and small cruiseship shorewalks in Three Hill Island, Gull Cove and Idaho Inlet. They also proposed recreation developments at Basket Bay and a small cruiseship shorewalk along Tenakee Trail.

A number of comments were received by Management Area (MA) or VCU. Comments addressing MAs wholly or partially within the area include the following:

- MAs C34 and C37 should be managed to emphasize subsistence and wildlife (Sitka Area State Parks Advisory Board).
- MAs C24, C25, C27, and C28 should have "far less logging than planned" and many places should be allocated to Primitive (Remote) Recreation. MAs C26, C35, C36, and C37 should have "no roads, period" (Sierra Club Juneau Group).
- MAs C27, C32, and C37 should all be in timber production; there is no justification for the Scenic Viewshed or Modified Landscape allocations (Alaska Forest Association, Timber Industry).
- No timber harvest in VCU 202 and 223; the shoreline of MA C29 and C34 should be allocated to the Modified Landscape LUD; VCU 202 should be in Scenic Viewshed.
- MA C29 should be managed as Wilderness, Primitive Recreation, or Old Growth, for its high value wildlife habitat and high scenic value.
- MA C29 should be managed for Timber Production; this is needed for an economic harvest; there isn't much use in this area (Alaska Forest Association, Timber Industry).
- VCUs 225, 226, 228, and 229 should have the "strongest possible protection" because this area is highly important for subsistence, hunting and fishing, and for wildlife habitat value.

Parts of this area were also identified in a number of Forest Plan appeals. The large majority of these appeals requested that specific areas within the Chichagof Roadless Area be protected from logging and identified rivers that should receive Wild and Scenic River designation. Areas specifically mentioned in these appeals included, but were not limited to, Upper Tenakee Inlet, Kadashan, Long Bay, Seal Bay, and Goose Flat Rivers. Organizations filing appeals that favored increased protection included SEACC, the Narrows Conservation Council, Sitka Conservation Society, Prince of Wales Conservation League, and the City of Tenakee Springs. Parts of the area were mentioned in an appeal that contested the redesignation of land in the Eight Fathom Timber Sale area and VCU 179 from timber production into Old Growth Habitat. This appeal was filed by Whitestone Southeast Logging, Inc.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review; however, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: Parts of the Chichagof Roadless Area were included in three project-level studies conducted over the past decade. These studies were the Southeast Chichagof Project Area FEIS (USDA Forest Service, 1992), Eight Fathom Timber Sale(s) EIS (USDA Forest Service, 1996), and the Southeast Chichagof Landscape Analysis (USDA Forest Service, 1999). Public comment expressed on the Southeast Chichagof Timber Sale EIS included concerns with the potential effect of road building across the Mud Bay LUD II area and on recreation and tourism. Concerns were expressed about adverse effects on fish and wildlife that would, in turn, adversely affect recreation and tourism. Concerns were also expressed about the effects of new roads on subsistence hunting and the effects on karst within the roadless area.

Public comment expressed on the Eight Fathom Timber Sale included a request by the Tenakee Springs Fish and Game Advisory Committee that the Forest Service reinstate Seal Bay and Long Bay to LUD II. Another commenter noted that Seal and Long Bays were incorrectly designated as LUD II areas in the old Forest Plan but are now correctly allocated to a LUD that allows commercial harvest. Concern was expressed that roads would create easy access for motorized hunting and be detrimental for deer

populations and villagers who hunt by hiking. The Kadashan area was specifically identified as an area that should not be harvested or roaded because of its high scenic quality. Commenters also requested that there be no road access at the head of Crab Bay.

Comments on the Finger Mountain Draft EIS included a desire to not further develop unroaded lands; if a timber sale was going to be authorized that it should be for smaller sales that use the existing road systems with only minor extensions of that system; and support for more development of the unroaded timber lands available under the Forest Plan.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as one of the 13 roadless areas they considered to have outstanding fish and wildlife values. They indicated there is high local and national support for managing this area in an unroaded condition, and local and national support for designating at least portions of this roadless area as wilderness. They recommend including the Pt. Adolphus/Mud Bay LUD II area within this conservation unit. They also indicated that the important wildlife values provided by this area warrant management that ensures the long-term integrity of its habitats, ecosystem processes, and ecological functions.

The Alaska Department of Fish and Game rated the Chichagof Roadless Area as the highest priority for protection in northern Southeast Alaska. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The city of Tenakee Springs passed a resolution recommending wilderness or LUD II protection for Crab Bay (VCUs 231-234), Seal Bay (VCUs 229-230), Long Bay (VCU 228), Upper Tenakee Inlet (VCUs 223-227), and Finn Cove (VCU 236).

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

SEACC recommended the remaining unlogged portions of Chichagof Island for a LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 311 for permanent protection as LUD II. Audubon Alaska recommended that Upper Tenakee Inlet should be protected from logging and road building.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence.

The president of the Hoonah Indian Association asked for the protection, conservation, and responsible management of this roadless area because of its special interest to the Huna People.

A number of cave/karst experts and other individuals noted that karst in the eastern portion of this area deserves more protection than it has now.

Many individuals recommended that upper Tenakee Inlet be protected because of the fish and wildlife (including brown bear) it produces and its beautiful, scenic natural areas. Seal Bay, Long Bay, Fat Lady Flats, and the end of the inlet were cited as prime examples. Some thought that upper Tenakee Inlet had valuable low elevation forest that should be protected. Some identified Crab Bay and Kadashan valley as important and some recommended the entire area for protection. Some individuals supported wilderness protection for the area around Point Adolphus and Mud Bay. Some individuals recommended it because of world-class scenery, abundant wildlife and habitat, and almost unilateral support for wilderness protection. Some individuals requested protection for Broad Finger and Broad Creeks.

(2) Nearby Roadless and Wilderness Areas and Uses: The West Chichagof-Yakobi Wilderness borders the Chichagof Roadless Area to southwest. The Admiralty Island National Monument-Kootznoowoo Wilderness is located approximately 9 miles east across Chatham Strait from the area. The Pleasant-Lemesurier-Inian Island Wilderness is located approximately one mile north of the area at its closest point. Glacier Bay National Park and Monument is located across Icy Strait to the north.

The north portion of the area is partially bordered to the east by the Neka Mountain Roadless Area (#342). The Neka Bay Roadless Area (#343) is also located in this vicinity separated from the Chichagof Roadless Area by an area of development. Other roadless areas within the immediate vicinity are Hoonah Sound (#328) (across Hoonah Sound to the west), North Baranof (#330) (across Peril Strait to the south), Point Craven (#314) (to the southeast and separated by roads and harvest units), Trap Bay (#312) (to the east and separated by roads and harvest units), Tenakee Ridge (#321) (to the north and east across Tenakee Inlet), and Game Creek (#323) (to the east across Port Frederick).

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	45	50
Sitka (Pop. 8,835)	30	45
Hoonah (Pop. 860)	10	15
Angoon (Pop. 572)	15	25

Gustavus has regular jet service in the summer and scheduled small plane service in the winter. Hoonah and Pelican have year-round scheduled small aircraft service. There is a charter service to Tenakee Springs and Elfin Cove. The Alaska Marine Highway serves Hoonah and Tenakee Springs on a regular basis and Pelican on a monthly basis.

(4) Relative Contribution to the National Wilderness Preservation System: The Chichagof Roadless Area is located on Chichagof Island. It is oriented from northwest to southeast and includes most of the central portion of the island. The area is bordered to the south and southwest by Lisianski Inlet, the West Chichagof-Yakobi Wilderness, Hoonah Sound, and Peril Strait from Soapstone Cove to False Island. The southeast portion of the area is bordered by areas developed for timber management that extend inland from False Island on Peril Strait and from Little Basket Bay on Chatham Strait. Chatham Strait and non-National Forest System lands border the area to the east. Most of the Chichagof Roadless Area is very mountainous with flatter areas primarily around the estuaries and tidal flats. There are high mountain lakes in the northern portion of the area. This roadless area is typical of recently glaciated terrain with rugged mountains dissected by steep-sided, U-shaped valleys and stream courses. There are many creeks and rivers, lakes, bays, and fiords in the area. Many large lakes such as Kook Lake, and lake chains such as those in the Meadow Creek area, are found throughout the roadless area. Major streams include the Lisianski, Trail, Kadashan, and Mud Bay Rivers, and Tonalite Creek. Saltwater bays and estuaries are numerous and exhibit much variety. The shoreline is rocky and difficult to access. Elevations range from sea level to 3,788 feet at the highest point, approximately 1.5 miles north of the mouth of the Lisianski River. Peaks exceeding 3,000 feet are scattered throughout the area. Elevations on the small islands are less, ranging to about 1,160 feet.

The Chichagof Roadless Area is unmodified except at some isolated areas primarily where old beach logging has occurred. Developments on adjacent lands occur in a few areas, but they do not detract from the wilderness attributes of the area. The roadless area has very high natural integrity and apparent naturalness. Because of the large size of the area, six portions were rated separately for natural integrity and apparent naturalness. The larger LUD II area has outstanding natural integrity and very high apparent naturalness. The smaller Kadashan LUD II area has high natural integrity and apparent naturalness. The non-LUD II area north of the portage at the head of Tenakee Inlet has high natural integrity and moderate apparent naturalness. The non-LUD II area from the portage to the east side of Seal Bay has outstanding natural integrity and very high apparent naturalness. The non-LUD II area from Seal Bay to Kadashan LUD II has high natural integrity and apparent naturalness. The non-LUD II to the east of Kadashan LUD II has moderate natural integrity and low apparent naturalness. The opportunity for solitude and primitive recreation in the Chichagof Roadless Area is very high to outstanding.

Approximately 15 percent of the landscape is considered distinctive from a scenery standpoint. There are extensive karst resources, hot springs, the Tonalite Creek Research Natural Area, and extensive cultural resources in the roadless area.

The roadless area includes about 62,350 acres of high-volume, old-growth forest. Of these acres, approximately 11,396 are mapped as high-volume, coarse-canopy old growth. It ranks among the top five Tongass roadless areas in terms of acres of high-volume, coarse-canopy old growth; the vast majority of this old growth is contained within non-development LUDs.

The Chichagof Roadless Area occurs in the East Chichagof Island and the West Chichagof Island Biogeographic Provinces. Approximately 90 percent of the roadless area is within the East Chichagof Island Biogeographic Province and makes up about 43 percent of that province . It is one of 12 inventoried roadless areas found in the province that collectively make up about 72 percent of the province. The province contains the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness, which make up 6 percent of the province. The province also includes all or portions of three LUD II areas, which make up approximately 27 percent of the province. The remaining 10 percent of the Chichagof Roadless Area is in the West Chichagof Island Biogeographic Province and makes up approximately 18 percent of that province. It is the only inventoried roadless area found in the province. The province contains West Chichagof-Yakobi Wilderness, which makes up 81 percent of the province. The province also includes portions of LUD II areas, which make up 6 percent of the province. Part of the LUD II areas are in the Chichagof Roadless Area.

The Chichagof Roadless Area lies within two ecological sections; it represents 23 percent of the Baranof-Chichagof Fjordlands Ecological Section and 11 percent of the Northeast Chichagof Fjordlands Ecological Section. The Baranof-Chichagof Fjordlands Ecological Section is well represented by existing wilderness and LUD II (28 and 13 percent, respectively) with an additional 35 percent in other non-development LUDs. The Northeast Chichagof Fjordlands Ecological Section is well represented in non-development LUDs (26 percent) plus a small portion (7 percent) is within LUD II.

The majority of this roadless area (57 percent) is within the North Chichagof Granitics Ecological Subsection; this portion of the roadless area represents 75 percent of the entire ecological subsection within the Tongass National Forest boundary. Approximately 19 percent of this ecological subsection is in existing wilderness, an additional 38 percent is in existing LUD II, and an additional 15 percent is protected by other existing non-development LUDs. The Peril Strait Granitics Ecological Subsection represents 33 percent of the roadless area; this portion of the roadless area represents 75 percent of the entire ecological subsection, which is well represented in non-development LUDs (40 percent, including 25 percent in LUD II). The Kook Lake Carbonates Ecological Subsection represents 7 percent of this roadless area; this portion of the roadless area represents 35 percent of the entire ecological subsection, which is well represented in non-development LUDs (31 percent, including 15 percent in LUD II). The Point Adolphus Carbonates Ecological Subsection represents 3 percent of this roadless area; this portion of the roadless area represents 16 percent of the entire ecological subsection, which is well represented in non-development LUDs (48 percent, including 16 percent in LUD II). The Outer Coast Wave-cut Terraces Ecological Subsection represents less than 1 percent of the Chichagof Roadless Area. This portion of the roadless area represents 1 percent of the entire ecological subsection and is well represented in existing wilderness (75 percent) and other non-development LUDs (21 percent). The Ushk-Patterson Bay Granitics Ecological Subsection represents less than 1 percent of this roadless area. This portion represents 0.2 percent of the entire subsection, which has approximately 19 percent in existing wilderness area and 49 percent in other non-development LUDs (including 43 percent in LUD II).

The Chichagof Roadless Area was rated at 25 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 12th from the highest (along with 12 other roadless areas) among the 109 Tongass inventoried roadless areas. It is tied for 1st among the 12 roadless areas in the East Chichagof Island Province. Because of the large size of the roadless area, several smaller areas were rated separately. A rating was done for the two larger existing LUD II areas , which resulted in a score of 26. A rating of 23 was given to the smaller existing LUD II area around Kadashan. A rating of 22 was given for the non-LUD II area north of the portage near upper Tenakee Inlet. A separate rating of 26 was given for the non-LUD II area from the portage to the east side of Seal Bay. A separate rating of 23 was given for the non-LUD II from Seal Bay to the Kadashan LUD II. Another separate rating of 20 was given to the non-LUD II area east of the Kadashan LUD II.

There is high local and national support to manage this area as unroaded, and local and national support for designating at least portions of the roadless area as wilderness. The roadless area contains one of the highest acreages of high-volume, coarse-canopy old growth among Tongass roadless areas. Designation as wilderness would create a large addition to the nearby West Chichagof-Yakobi Wilderness that would include very high to outstanding wilderness attributes and moderate to high supplemental features including karst resources, hot springs, the Tonalite Creek Research Natural Area, and extensive cultural resources in the roadless area. This is especially true when areas adjacent to developed areas and near communities is separated from the main roadless area. Overall, the factors identified here indicate that the relative contribution to the National Wilderness Preservation System would be very high.

V. Environmental Consequences

The Chichagof Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, or 4 is implemented. Approximately 61 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 39 percent of the area. The land in the development LUDs provides an estimated 11,164 acres that are suitable for timber production (18 percent of the suitable land on the Hoonah and Sitka Ranger Districts). Approximately 262 acres of the suitable lands are classified as high-volume, coarse-canopy old growth. This area contains approximately 8,802 acres of land identified as a mineral activity tract having a high to moderate potential for experiencing mineral exploration and development of locatable minerals . In addition, this area contains approximately 108,988 acres of undiscovered locatable mineral resources; 12,698 of these acres are considered to have moderate potential for development. There are 11 special use permits within the area. There is a potential powerline route along the Kadashan River. The values associated with the natural settings of the roadless area outside of designated LUD II areas could be affected by developments allowed by the Forest Plan. The cultural, karst, geologic and most of the scenic values are protected by the Forest Plan.

Under Alternative 2, the 238,456-acre portion of the roadless area currently allocated to LUD II would be converted to Recommended Wilderness. This would not affect timber sale projects because this area is currently allocated to a non-development LUD. The total area mapped as suitable for timber production would not change from Alternative 1. The potential for other development, including recreation, some special uses, the potential powerline, and mineral, could be restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the current LUD II portion of the roadless area, including the cultural, scenic, karst, and geologic values, would continue to be provided long-term protection if designated wilderness.

Under Alternative 5, 348,599 acres of the roadless area currently allocated to LUD II, Timber Production, Old-growth Habitat, Modified Landscape, Scenic Viewshed, and Semi-Remote Recreation would be converted to Recommended Wilderness. This would affect those current timber sale projects inside the converted area (part of Finger Mountain) and would affect future potential projects. Lands suitable for timber production would be reduced to 5,570 acres. The potential for other development, including recreation, some special uses, the potential powerline along the Kadashan River, and mineral, could be restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the cultural, scenic, karst, and geologic values, would be provided long-term protection if designated wilderness.

Under Alternative 6, most of the roadless area outside of existing LUD II would be converted to Recommended LUD II and the remainder would be converted to Recommended Wilderness. Mineral prospecting and development, some special uses, and some recreation developments could continue, but no timber harvest would be allowed. The potential powerline along the Kadashan River may not be allowed. The values associated with the natural settings of the roadless area, including the cultural, scenic, karst, and geologic values, would be provided long-term protection if designated LUD II and wilderness.

Under Alternative 7, 349,291 acres of the roadless area currently allocated to LUD II, Timber Production, Old-growth Habitat, Modified Landscape, Scenic Viewshed, and Semi-Remote Recreation would be converted to

Recommended Wilderness. This would affect those current timber sale projects inside the converted area (part of Finger Mountain), and would affect future potential projects. Lands suitable for timber production would be reduced to 5,569 acres. The potential for other development, including recreation, some special uses, the potential powerline along the Kadashan River, and mineral, could be restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the majority of the roadless area west and south of Tenakee Inlet, including the cultural, scenic, karst, and geologic values, would be provided long-term protection if designated wilderness.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber sale projects would not be allowed, and the potential for other development, including recreation, special uses, powerline, and mineral, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the cultural, scenic, karst, and geologic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 311 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness		238,456			348,599	33,003	349,291	534,310
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	39,507	39,507	39,507	39,507	15,967		15,286	
Semi-remote Recreation	40,682	40,682	40,682	40,682	40,011		40,010	
Recommended LUD II						295,314		
LUD II	238,456		238,456	238,456	34,248	205,993	34,245	
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	4,065	4,065	4,065	4,065	2,438		2,438	
Modified Landscape	4,918	4,918	4,918	4,918	2,405		2,405	
Timber production	206,681	206,681	206,681	206,681	90,642		90,634	
TOTAL	**534,310**	**534,310**	**534,310**	**534,310**	**534,310**	**534,310**	**534,310**	**534,310**
Suitable Timber Lands	11,164	11,164	11,164	11,164	5,570	0	5,569	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Trap Bay (312)

ACRES (NFS): 13,821

BIOGEOGRAPHIC PROVINCE: East Chichagof Island

ECOLOGICAL SECTION: Northeast Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 19 (23)

I. Overview and Description

(1) Location and Access: The Trap Bay Roadless Area is located on the east side of Chichagof Island. Tenakee Inlet and Chatham Strait border the area to the north and east, respectively. Kook Lake and Basket Bay border the area to the south. Developed areas associated with the Corner Bay road system border the area to the west, south, and east. Juneau, the closest larger community, is located approximately 45 air miles northeast of the area.

Tenakee Springs, the closest community, is located approximately 4 miles northwest. Tenakee Springs has regular charter plane service and is on the Alaska Marine Highway ferry route. One may use the road system out of Corner Bay to access this roadless area. The area may also be accessed by boat and floatplane. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: Tlingit tradition includes stories about the area, such as the fishermen of Angoon using the clouds at the top of Trap Bay Mountain as a weather barometer to tell the direction of the wind on Chatham Strait. Another story concerns an underground stream that flows from Kook Lake to Basket Bay and has a salmon run. Before entering Basket Bay, the stream passes through a cave into which the Natives would climb to hunt seals and to fish.

The Hoonah and Angoon Tlingit were using this area of Chichagof Island at the time of Euroamerican contact. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout the area.

(3) Geography and Topography: The Trap Bay Roadless Area contains four well-defined ridge systems and three large drainages. About 80 percent of this area is mountainous with 40 percent being very rough and steep. The streamside zones total about 20 percent of the area. Elevations range from sea level to 3,870 feet in the west-central portion of the unit. Kook Lake borders the area to the south, but there are no sizeable lakes within the roadless area itself.

There are 10 miles of shoreline on saltwater. Other terrain features include 658 acres of alpine tundra, 39 acres of ice and snow, 821 acres of rock, and 4 acres of islands

(4) Ecosystem:

(a) Classification: Biogeographic Province. This area is located within the East Chichagof Island Biogeographic Province. This province has a dryer and colder climate than the outer coast of Chichagof Island and the winter snow pack is generally greater. Chichagof Island is deeply dissected into three peninsulas that may be functioning biologically more like separate islands. Vegetation in this province represents a modal condition similar to Admiralty Island Province.

Ecological Section/Subsection. The Trap Bay Roadless Area is contained entirely within the Northeast Chichagof Fjordlands Ecological Section (M247C). This area is represented by one ecological subsection (see table below). The lithology of Kook Lake Carbonates Ecological Subsection is primarily comprised of

intrusive igneous and locally metamorphosed rocks and secondarily of limestone and marble. Inland, mineral soils with distinct organic layers dominate. Higher elevations support small alpine vegetative communities and the moderately sloped mountains support productive hemlock-spruce forests (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Northeast Chichagof Fjordlands	Kook Lake Carbonates	100%

(b) Soils: Glaciers played an important part in the placement and character of soil parent material in this area. The development of soils is influenced by high levels of rainfall, cool summer temperatures, a short growing season, and moderately low soil temperatures. Shallow soils with good drainage develop on steeper slopes due to rapid loss of material by erosion and efficient rainwater runoff. Deep, well-drained soils commonly occur below shallow soils on gentler slopes where transported soil materials have collected. Poorly drained soils are associated with low relief and impermeable subsurface layers.

In locations with poor drainage, deep organic soils (muskegs) tend to form. This situation occurs where the soil material fails to provide sufficient internal drainage or where topography prevents external drainage. Drainage improves with increased slope gradient, however, as slopes become oversteepened, soil depths become much shallower. In riparian areas, soil zones tend to contain sand and gravels as a result of flood deposition.

(c) Vegetation: Dense western hemlock/Sitka spruce forests dominate the timbered overstory, with an understory of shrubs, such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

The muskegs are dominated by sphagnum mosses, sedges, and shrubs of the heath family and are interspersed among low-elevation timber stands where drainage is restricted. Trees are sparse in these areas and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar. Less than 100 acres of muskeg are mapped for the area, however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

Tideflats found at the heads of the bays and estuaries generally support sea milkwort, glasswort, and algae. Beach meadows occur between the shore and the forest. Lower beach meadows are composed of beach ryegrass, reed bent grass, hairgrass, fescue grass, beach lovage, goose tongue, and sedges. Upper beach meadow plants include yarrow, bedstraw, starwort, ferns, western columbine, and cow parsnip. Oregon crabapple, alder, devil's club, and blueberry occur along the border of the beach meadow and the forest.

At elevations above 2,000 feet, the plant communities are characterized by low shrubs, grasses, and sedges (approximately 656 acres are mapped as alpine). Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 9,601 acres mapped as forest land of which 7,058 acres or 74 percent are mapped as productive old-growth forest. Of the productive old growth, 3,500 acres or 50 percent are mapped as high-volume old-growth forest. The productive old growth includes about 979 acres of high-volume, coarse-canopy old growth. There are no acres of second-growth forest where timber harvest has occurred in the past.

(d) Fish Resources: There is one unnamed fish-bearing stream in this area, which provides habitat for coho, pink, and chum salmon, as well as Dolly Varden char.

(e) Wildlife Resources: Wildlife species diversity is relatively high. Species include brown bear, Sitka black-tailed deer, pine marten, mink, and river otter, as well as smaller mammals and several amphibians. Moose are reported to inhabit Chichagof Island (MacDonald and Cook, 1999), but neither they nor mountain goats have been reported here. There are relatively few resident bird species; however, the area is used by many migratory species. Eagles are common in the coastal zone.

(5) Management Direction and Current Uses: This area was allocated to five Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These five LUDs are Timber Production, Scenic Viewshed, LUD II, and Old-growth Habitat.

LUD	Acres
Timber Production	5,819
Scenic Viewshed	325
LUD II	6,415
Old-growth Habitat	1,261

Approximately 44 percent of the roadless area was allocated to development LUDs (Timber Production and Scenic Viewshed). Approximately 42 percent of the roadless area was allocated to the Timber Production LUD. In the Corner Bay area, approximately 2 percent of the roadless area was allocated to the Scenic Viewshed LUD.

Approximately 56 percent of the roadless area was allocated to one of two non-development LUDs (LUD II, Old-growth Habitat). Around Trap Bay, approximately 46 percent of the roadless area was designated by Congress as LUD II in the 1990 Tongass Timber Reform Act. Old-growth Habitat LUD was assigned to approximately 9 percent of the roadless area.
There are three research cabins located in the Trap Bay area. Two belong to federal agencies - the Forestry Science Lab (Forest Service) and the National Marine Fisheries Service - and one belongs to the State of Alaska (ADF&G).

There is an identified anchorage in Trap Bay. The recreation activities taking place in this area are waterfowl and big game hunting, hiking, viewing wildlife/fish, saltwater shore recreation, stream and lake fishing, cross-country skiing, and powerboat use. There is a special use permit in VCU 238 for an electronic site. There are a number of outfitters and guides holding special use permits that use this area. Outfitter/guide use was reported at three locations in and adjacent to the area in 1999. A total of four groups and 12 clients were reported. Outfitter/guide use activities included fishing and brown bear hunting. Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified the four VCUs wholly or partially located within the area as subsistence use areas with a high sensitivity to disturbance.

The Trap Bay Roadless Area was historically part of the Alaska Pulp Corporation Long-Term Timber Sale Contract Area.

(6) Appearance (Apparent Naturalness): Other than the areas adjacent to locations developed for timber management, the Trap Bay Roadless Area appears natural and unmodified. The boundaries adjacent to the developed areas appear highly modified. From Chatham Strait, the area provides a natural background to the developed areas, which might be seen in the foreground. From the surrounding bays, the area appears to be unmodified.

(7) Surroundings (External Influences): Most of the Trap Bay Roadless Area is isolated from the rest of Chichagof Island by a strongly-defined ridge system that generally follows the south and west borders of the area. Tenakee Inlet borders the area to the north. The townsite of Tenakee Springs is located approximately 4 miles to the northwest, across the Inlet. Tenakee Springs is on the Alaska Marine Highway route and has regularly scheduled small plane service. Chatham Strait borders the area to the east. Boats and small planes use this area regularly.

The Kook Lake road system and associated developments border the area to the south and east. This road system is approximately five miles long and connects with the Corner Bay road system. Kook Lake and Basket Bay, located south of this developed area, are used heavily for subsistence and recreation. A Public Recreation Cabin is located on the western end of Kook Lake outside the roadless area. There is an unmaintained trail from Basket Bay to the southern shore of Kook Lake, and another from the Kook Lake road to the cabin and lake.

The Corner Bay road system and associated developments border the area to the west, south, and east. This area was initially developed in the early 1970s and associated management activities are ongoing.

(8) Attractions and Features of Special Interest: Trap Mountain is very rugged and imposing. The area to the north of the mountain is a large cirque. The area contains three inventoried recreation places, which cover 1,222 acres, or nine percent of the roadless area. Fishermen fishing Chatham Strait use Trap Bay as an overnight anchorage. Trap Mountain was special to the Alaska Natives because they used the clouds around the top of the mountain to see which way the wind was blowing on Chatham Strait. The chances of seeing brown bear and deer in this area are very good.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of this roadless area changed between 1989 and 2003. Ongoing development has occurred on the east side of the area during this period. These developments now extend along drainage channels into the area. Additional development occurred along the south border of the area. These developed areas are excluded from the boundaries of the 2003 area. Several small areas were excluded from the area between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: Little human modification has occurred in this area. The natural integrity of the area is basically intact. The only developments within this area are the three research cabins, which are unobtrusive and do not generally detract from the area's apparent naturalness. There are no other readily apparent signs of human activities. However, the highly modified areas surrounding this roadless area reduce the natural integrity to moderate and apparent naturalness to high and, thus, the suitability of this natural appearing area for wilderness classification. There is an electronic site on the northeast corner of the roadless area, which is visible from Chatham Strait and Tenakee Inlet.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a relatively high opportunity for solitude and primitive recreation in this area. Boats and small planes use this area regularly. Because of lack of access and use, solitude would be easier to find further into the center of this area.

The character of the landforms provide a feeling of remoteness away from the shoreline. The Trap Bay Roadless Area is readily accessed by boat or small plane. The recreation activities taking place in this area are waterfowl and big game hunting, hiking, viewing wildlife/fish, saltwater shore recreation, stream and lake fishing, cross-country skiing, and powerboat use. Outfitter/guide use was reported at three locations in and adjacent to the area in 1999. A total of four groups and 12 clients were reported. Outfitter/guide use activities included fishing and brown bear hunting.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	10,589	77%
Semi-Primitive Motorized (SPM)	1,239	9%
Roaded Modified (RM)	1,984	14%

The area contains three inventoried recreation places, which cover 1,222 acres, or nine percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	0	0
SPM	2	1,158
RM	3	64

* Recreation Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Recreation Places.

There are no public recreation cabins in the Trap Bay Roadless Area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Trap Bay Roadless Area was 14 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 19. This rating is more reflective of the topographic screening between the developed areas and the interior of the area, especially the Trap Bay watershed and the coastline. The Trap Bay watershed and LUD II area was also rated separately and received 23 points.

(4) Ecologic and Geologic Values: This roadless area is located on the east side of Chichagof Island. The area is separated from other nearby roadless areas, Chichagof (#311) and Point Craven (#314), by forest roads and timber harvest units.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment does not list this area as having primary sport fish or salmon producing areas. It is primarily a secondary salmon producer (ADF&G, 1998). Streams in the area provide spawning and rearing habitat for pink, chum, coho, and Dolly Varden char. There is one catalogued anadromous fish-bearing stream in this roadless area, draining into Trap Bay (ADF&G, 2000).

(b) Wildlife Resources: Wildlife species present in this roadless area include brown bear, Sitka black-tailed deer, pine marten, mink, and river otter, as well as smaller mammals and several amphibians. Moose are reported to inhabit Chichagof Island (MacDonald and Cook, 1999), but neither they nor mountain goats have been reported here. There are relatively few resident bird species; however, the area is used by many migratory species. Eagles are common in the coastal zone. The entire roadless area has been identified as habitat for the management indicator species of Sitka black-tailed deer, brown bear, pine marten, and red squirrel.

Based on harvest data compiled from 1985 to 1995, VCU 236 on Tenakee Inlet and partially located in this area was ranked in the second 25 percent of brown bear harvest areas on the Tongass (ADF&G, 1998).

This area has been identified as providing temporary habitat for migrating American peregrine falcons, which pass through the forests during spring and fall migration flights. The bald eagle, a protected species, uses the area for nesting and roosting.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks, are closely associated with productive old growth. In addition, 12 sensitive plant species are known or suspected to occur in the Sitka Ranger District.

(d) Karst, Cave, and Other Geologic Resources: A portion of this area is underlain by limestone or marble and karst and cave resources are known to have developed there. Only limited inventory has occurred in this area so the extent of karst and cave development is not fully understood. The limestones and marbles found here are commonly the ridge forming rock types. Extensive karst systems are known from the intensity and numbers of features found described from the limited inventory and air photo interpretations. Paleontological discoveries are likely as well as archaeological finds. Because of the thickness of the limestone and marble in this area, vertical pits and cave systems of record depth are possible. Extensive areas of limestone and marble are exposed from sea level to the ridge tops in these glaciated valleys. The karst systems found here extend from the alpine or higher elevations to the sea providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. The mapped karst resources encompass approximately 5,668 acres or 41 percent of the roadless area. Approximately 70 percent of the karst is classified as having high vulnerability to disturbance. There are no glaciers in this area; however, the area to the north of Trap Mountain contains a large cirque. No other unique geologic features are known.

(5) Scientific and Educational Values: Trap Mountain is an impressive mountain with an exposed rock top, continuing into different types of alpine vegetation and finally into a heavy old-growth forest at the base. These features of exposed rock, different alpine vegetation types, and heavy timber growth are found all along the ridge systems in this area. The autumn colors in the alpine zone are spectacular in this area.

There are no Research Natural Areas in the Trap Bay Roadless Area. Tenakee Springs, located approximately 4 miles northwest of the area, is the closest community with school-age children. Juneau, the closest larger community, is located approximately 42 air miles north of the area.

(6) Scenic Values: The visual character type of this area is Admiralty-Chichagof. Landforms associated with this character type are generally rounded, low mountains; however, Trap Bay Mountain is a tall, steep, very-rugged mountain with craggy peaks and steep, sharply defined ridgelines. Rocky shorelines, interspersed with gravel beaches are found along the coastline. Streams are short and swift, flowing directly to saltwater. Small bays and estuaries are present and show a range of visual characteristics. Lower slopes are densely vegetated and interspersed with muskeg and small lakes. Upper slopes appear bare from a distance, but often contain muskeg, alpine tundra vegetation, and scattered tree cover. From Chatham Strait, the area provides a natural background to evidence of timber production, which might be seen in the foreground. The electronic site located on the northeast corner of the roadless area is visible from Chatham Strait and Tenakee Inlet. From the surrounding bays, the area appears to be unmodified.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include Chatham Strait (which is part of Alaska Marine Highway), a tour ship route, a small boat route, and Corner Bay (which is identified as a boat anchorage).

The Trap Bay Roadless Area is inventoried as approximately 28 percent Variety Class A (possessing landscape diversity that is unique for the character type), 51 percent Variety Class B (possessing landscape diversity that is common for the character type), and 20 percent Variety Class C (possessing a low degree of landscape diversity).

Much of the area (64 percent) is inventoried as Existing Visual Condition (EVC) I, which appears untouched by human activity. Approximately 36 percent of the area is inventoried as an EVC V, where changes to the landscape are obvious to the average visitor.

(7) Social, Cultural, and Historical Values: Tlingit tradition includes stories about the area, such as the fishermen of Angoon using the clouds at the top of Trap Bay Mountain as a weather barometer to tell the direction of the wind on Chatham Strait. Another story concerns an underground stream that flows from Kook Lake to Basket Bay and has a salmon run. Before entering Basket Bay, the stream passes through a cave into which the Alaska Natives would climb to hunt seals and to fish.

The Hoonah and Angoon Tlingit were using this area of Chichagof Island at the time of Euroamerican contact. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout the area.

The recreation activities taking place in this area are waterfowl and big game hunting, hiking, viewing wildlife/fish, saltwater shore recreation, stream and lake fishing, cross-country skiing, and powerboat use. There are a number of outfitters and guides holding special use permits that use this area. Outfitter/guide use was reported at three locations in and adjacent to the area in 1999. A total of 4 groups and 12 clients were reported. Outfitter/guide use activities included fishing and brown bear hunting.

Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified all four VCUs wholly or partially located within the area as subsistence use areas with a high sensitivity to disturbance. One of the VCUs with a small part located within this area (VCU 239) was included among the VCUs with highest community use value and another (VCU 236) was included in the third most important group. It should, however, be noted that VCU 239 also includes Kook Lake and Basket Bay, which are located south of the Trap Bay Roadless Area.

(8) Manageability as Wilderness and Boundary Conditions/Changes: Manageability as wilderness is moderate to high, especially for the Trap Bay watershed and coastline. The coastline along Tenakee Inlet to the north provides an easily defined boundary. There are strong ridge systems to the south and west that separate the Kook Lake and Corner Bay road systems from the Trap Bay Roadless Area; however, developments have taken place along the borders of the area and extend along major drainages into the area. Activities on the southern boundary (along Kook Lake) detract from the area's manageability for wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: The area is easily accessed via road or saltwater. The potential exists for increased recreation use. The potential also exists for more frequent outfitter/guide use of the area.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: There are no fisheries enhancement projects planned for this area.

(4) Wildlife Resources: There is potential for the introduction of mountain goats in the Trap Bay Mountain area and on the adjoining ridge systems.

(5) Timber Resources: There are 7,058 acres mapped as productive old growth and no acres mapped as second growth due to harvest in the roadless area. There are no acres of second growth where timber harvest has occurred in the past. Of these acres, 966 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 266 acres (2 percent) of this roadless area are estimated to be suitable for timber production. Approximately 115 of the suitable acres are mapped as high-volume old growth, of these acres, less than 10 are mapped as high-volume, coarse-canopy old growth.

This area was historically part of the Alaska Pulp Corporation Long-Term Contract Area. The potential for managing timber in this roadless area is high. While the majority of the area is not suitable for timber management and 46 percent of the area has been assigned LUD II status, the Trap Bay Roadless Area is bordered by roads on three sides. In addition, roads extend along major drainages into the east side of the area. Large areas of mature/overmature timber that meet operability criteria, coupled with accessibility from existing road systems, make timber harvest a viable proposition in this area.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: There are no inventoried sites with high mineral development potential in the area. This area contains 3,896 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have low potential for development.

(8) Transportation and Utilities: There are no proposed transportation or utility corridors within or adjacent to this area. The area is bordered to the north, south, and east by forest roads and associated harvest units. Roads extend along drainages into the area.

(9) Water Availability and Use: Three research cabins are located within this area and are the only existing facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects in the area.

(10) Areas of Scientific Interest: The mapped karst resources encompass approximately 5,668 acres or 41 percent of the roadless area. There are no other known areas of scientific interest in this roadless area.

(11) Land Use Authorizations: There is a special use permit on the northeast corner of the roadless area for an electronic site. There are a number of outfitters and guides holding special use permits that use this area. The current special use permits will probably continue. The potential exists for more frequent outfitter/guide use of the area.

(12) Land Status: All land within the roadless area is part of the National Forest System. A small part of the roadless area in the southeast is encumbered.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Much of the use within this area is associated with Tenakee Springs and areas that have been developed. There is boat use to Trap Bay from the surrounding towns and transit fishermen fishing on Chatham Strait.

Local issues include the continuing development of the timber lands, the effects of this development on fisheries and wildlife habitat, maintaining the visual quality of high-interest areas, maintaining lifestyles, location of log transfer facilities, the distribution of harvest volume classes, and the tradeoffs between environmental protection measures and the economics of timber harvest activities.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill included the Trap Bay Wilderness. This area was proposed as wilderness in recognition of its world class brown bear hunting and highly valued scenic, recreation, fisheries, and subsistence resources. This portion of the roadless area is now a Congressionally designated LUD II area. In 2001, HR 2908 identified the area as a proposed Wilderness Addition. The developed areas that border the area to the south were identified for protection as Restoration Areas. The developed areas that border the area to the east and west were primarily identified as “roaded areas available for logging.”

(c) Public Input During Forest Plan Revisions and Appeals: This area was not specifically identified in public input during the Forest Plan revisions and appeals, but a number of comments were made with respect to Tenakee Inlet, which borders the area to the north. Many commenters (including the City of Tenakee Springs, Taku Conservation Society, National Audubon Society, and Tenakee Fish and Game Advisory Board) stated that the important scenic, wildlife, fishing, and (especially) subsistence values and habitats of Tenakee Inlet must be protected. They felt that the area has many natural values warranting protection and that there is much public support for protection and reducing timber harvest. Timber industry representatives requested that Management Area (MA) C37, which includes the Trap Bay Roadless Area, be managed for timber production. Another commenter requested that logging not be permitted in MA C37 and other nearby areas until future tourism resources are assessed. The Sierra Club Juneau Group requested that no roads be built in this area. The Sitka Area State Park Advisory Board requested that MA C37 be managed to emphasize subsistence and wildlife.

The appeal filed by the Hoonah Indian Association et al. identified west Chatham Strait as a customary and traditional hunting and fishing area for Angoon and expressed concern that the alternatives presented in the

Forest Plan did not adequately protect this area from logging. They also noted that the west Chatham Strait area has lost substantial deer habitat from past logging. The appeal filed by the City of Tenakee Springs requested that no new roads be built in Tenakee Inlet until the Forest Service discloses its long-term road building plans for the area and the public has an opportunity to comment on them. They also requested that remaining patches of old-growth habitat left in the area be assigned to protected LUDs and future logging operations be limited to fully protect subsistence and sport use of deer.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area is not within the study area of any recently completed project-level EISs.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Department of Fish and Game rated the Trap Bay Roadless Area as the ninth highest priority for protection in northern Southeast Alaska. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

SEACC recommended Trap Bay for wilderness.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

A number of cave/karst experts and other individuals noted that karst in this area deserves more protection than it has now.

(2) Nearby Roadless and Wilderness Areas and Uses: Other roadless areas in the immediate area include Tenakee Ridge (321) and Pavlof/East Point (319) (located to the north across Tenakee Inlet), and Chichagof (311) (located to the south and west). Other roadless areas in the general area include Point Craven (314), Game Creek (323), and North Baranof (330).

Admiralty Island National Monument-Kootznoowoo Wilderness is located approximately 6 miles east across Chatham Strait from the area. The West Chichagof-Yakobi Wilderness is located west across Chichagof Island, approximately 48 miles away.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	45	65
Sitka (Pop. 8,835)	30	90
Hoonah (Pop. 860)	25	45
Angoon (Pop. 572)	20	20

Tenakee Springs is the closest town that is on the regularly-scheduled route of the Alaska Marine Highway system. Other terminals are located at Hoonah and Angoon. Commercial airline service is available at Sitka and Juneau.

(4) Relative Contribution to the National Wilderness Preservation System: The Trap Bay Roadless Area is located on the east side of Chichagof Island. Tenakee Inlet and Chatham Strait border the area to the north and east, respectively. Kook Lake and Basket Bay border the area to the south. Developed areas associated with the Corner Bay road system border the area to the west, south, and east. The Trap Bay Roadless Area contains four well-defined ridge systems and three large drainages. Elevations range from sea level to 3,870 feet in the west-central portion of the area. Trap Mountain is very rugged and imposing.

The area generally appears natural and unmodified especially the Trap Bay Watershed and LUD II area. The natural integrity and apparent naturalness is rated moderate to high. The area has high opportunities for solitude and primitive recreation.

The roadless area has moderate to high scenic quality; approximately 28 percent of the landscape is considered distinctive from a scenery standpoint. Approximately 41 percent of the area has well developed karst. No other outstanding or unique values or features are known in the area.

The roadless area includes about 3,500 acres of high-volume, old-growth forest. Of these acres, approximately 979 are mapped as high-volume, coarse-canopy old growth.

The Trap Bay Roadless Area lies within the East Chichagof Island Biogeographic Province and makes up about 1 percent of the province. It is one of 12 inventoried roadless areas found in the province that collectively make up about 67 percent of the province. Approximately 79 percent of the province is unroaded. The province contains the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness, which make up 6 percent of the province. The province also includes all or portions of three LUD II areas, which make up approximately 25 percent of the province.

The Trap Bay Roadless Area lies completely within the Northeast Chichagof Fjordlands Ecological Section. This portion represents 3 percent of the ecological section and is well represented in other non-development LUDs (26 percent) and a small portion (7 percent) is within LUD II.

This roadless area is completely within the Kook Lake Ecological Subsection. This portion of the roadless area represents 14 percent of the entire ecological subsection, which is well represented in non-development LUDs (31 percent, including 15 percent in LUD II).

The Trap Bay Roadless Area was rated at 19 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 70th from the highest (along with 13 other roadless areas) among the 109 Tongass inventoried roadless areas. Another rating was done for the area that included the Trap Bay watershed and LUD II area only, which resulted in a score of 23.

There is both local and national support for managing the roadless area in an unroaded condition, but there has been relatively little support for designating the area as wilderness. Designation would create a small wilderness that has areas of well developed karst. The old growth in the area is mostly contiguous and in contrast to the more fragmented old growth stands in surrounding areas that have ongoing developments. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate, particularly after separating out the Trap Bay watershed and LUD II area only.

V. Environmental Consequences

The Trap Bay Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, or 4 is implemented. Approximately 56 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 44 percent of the area. The land in the development LUDs provides an estimated 266 acres that are classified as suitable for timber production (1 percent of the suitable acres on the Hoonah Ranger District). Less than 10 of those suitable acres are classified as high-volume, coarse-canopy old growth. This area contains an estimated 3,896 acres of undiscovered, locatable mineral resources that are considered to have low potential mineral value. A special use permit for an electronic site is located in the area. The values associated with the natural settings of the roadless area outside the existing LUD II area could be affected by timber management activities allowed by the Forest Plan. The karst and most scenic and old-growth values of the roadless area are protected by the Forest Plan.

Under Alternatives 2 and 5, approximately 6,415 acres of this roadless area currently allocated LUD II would be converted to Recommended Wilderness. This would not affect timber sale projects because this area is currently allocated to LUD II. The total area suitable for timber production would not change from Alternative 1. The existing special use permit for the electronic site would continue. The potential for other development, including

recreation, mineral, and special uses, could be restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the existing LUD II portion of the roadless area, including the scenic, old-growth, and karst values, would continue to receive long-term protection if designated wilderness.

With Alternatives 6, 7, and 8, the entire roadless area would be converted to Recommended Wilderness. Timber sale projects would not be allowed, and the potential for other development, including recreation, special uses, and mineral, could be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic, old growth, and karst values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 312 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness		6,415			6,426	13,821	13,821	13,821
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	1,261	1,261	1,261	1,261	1,259			
Semi-remote Recreation								
Recommended LUD II								
LUD II	6,415		6,415	6,415				
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	325	325	325	325	325			
Modified Landscape								
Timber production	5,819	5,819	5,819	5,819	5,811			
TOTAL	13,821	13,821	13,821	13,821	13,821	13,821	13,821	13,821
Suitable Timber Lands	266	266	266	266	266	0	0	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Rhine (313)

ACRES (NFS): 16,675

BIOGEOGRAPHIC PROVINCE: Northern Coast Range

ECOLOGICAL SECTION: Boundary Ranges

2002 WILDERNESS ATTRIBUTE RATING: 18

I. Overview and Description

(1) Location and Access: The Rhine Roadless Area is located on the Juneau mainland and is part of a very extensive mainland roadless area that includes portions of western British Columbia. The roadless area occupies the north headland at the mouth of Taku Inlet. Electric transmission line corridors border the area to the north and south, with Taku Inlet forming most of the east boundary. The transmission line corridor that borders the area to the north separates it from the Taku-Snettisham Roadless Area. The city of Juneau, located approximately 10 miles west of the area, is the closest urban area. It has regularly scheduled air flights and is on the Alaska Marine Highway.

The area may be accessed by saltwater from Taku Inlet and also by trail. Trail 554 extends from the Juneau road system into the north portion of the Rhine Roadless Area and follows the shoreline to Sunny Cove at the north end of the area. Access into the interior is by foot or helicopter. There are no flat areas in this roadless area suitable for landing airplanes.

(2) History: The area has a long and varied history of use, dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. The Taku River is a travel corridor that has been used continually since the earliest human occupation of the area. Goldschmidt and Haas (1946) identified the sites of former villages at Bishop Point and on the west side of Sunny Cove, as well as a former smokehouse or cabin north of the village site near Sunny Cove. They also indicated that hunting or trapping and salmon harvest historically occurred in the area.

(3) Geography and Topography: The area is typical of recently glaciated mainlands of Southeast Alaska. The north part of the area is mountainous with elevations reaching 4,210 feet. A number of drainages flow through the north portion of the area to Taku Inlet. These drainages include Grindstone and Rhine Creeks. An unnamed glacier is located north of these drainages. The south portion of the area consists of a strip of land along the shoreline. This part of the area includes a west-facing slope, a narrow mountainous ridge, and Circle Point, which forms the south part of the entrance to Slocum Inlet.

The area includes 8 miles of shoreline on saltwater. A large part of the area is alpine tundra (877 acres), ice and snow (994 acres), and rock (4,366 acres). The area also includes 4 islets totaling an acre.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is located within the Northern Coast Range Province, which is characterized by little maritime influence and rugged and glaciated topography.

Ecological Section/Subsection. The Rhine Roadless Area is contained entirely within the Boundary Ranges Ecological Section (M246B). The Boundary Ranges Icefields Ecological Subsection represents the entire Rhine Roadless Area. A northwest-southeast trending batholith of resistant granite and granodiorite underlies this portion of the Coast Mountains. It consists of a discontinuous mix of icefields and glaciers

separated by river valleys and pierced by nunataks and scree fields. Forests comprise a minor part of the vegetation along coasts and rivers (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Boundary Ranges	Boundary Ranges Icefields	100%

(b) Soils: Shallow mineral soils (less than four inches deep) on steep, V-notched, dissected sideslopes are common in the glacially-formed, U-shaped valleys of Southeast Alaska and in this particular analysis area. Small areas of organic soils (muskegs) are found on sideslope benches where subsurface drainage is impaired. Inclusion of fine-textured (clay) soils of glacial origin occur infrequently along lower sideslopes, posing potential hazard. Slides are not uncommon.

(c) Vegetation: Vegetation in this roadless area primarily consists of typical spruce/hemlock forests. Western hemlock and Sitka spruce dominate the overstory while the understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants. Vegetation classified as muskeg is not abundant (no acres are mapped). However, muskeg is interspersed within other types in units too small to map. Therefore, the acreage for muskeg may be substantially understated. These areas, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low-elevation timber stands where drainage is restricted. Trees within the muskegs are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar.

There are 4,985 acres mapped as forest land, of which 2,332 acres or 47 percent are mapped as productive old-growth forest. Of the productive old growth, 123 acres or 5 percent are mapped as high-volume old-growth forest. The productive old growth does not include any high-volume, coarse-canopy old growth. There is no second growth in this area.

(d) Fish Resources: The Alaska Department of Fish and Game (ADF&G) rated fish resources in its Forest Habitat Integrity Program (1983). These ratings describe the value of VCUs for sport fish, commercial fish, and estuaries. Two of the VCUs (VCUs 41 and 51) that comprise this area were rated high for commercial fish, with one (VCU 41) also rated high as an estuary. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not identify any of the VCUs that comprise this area as primary salmon or sportfish producers.

The Anadromous Waters Catalogue and Atlas (ADF&G, 1998) does not identify any anadromous fish-bearing streams in this area. Rhine Creek and Grindstone Creek are two minor streams in the north portion of the area.

(e) Wildlife Resources: Generally, the roadless area provides Sitka black-tailed deer, moose and good mountain goat habitat, and these species are present. Other large mammal species include wolves and both black and brown bear. Furbearers such as mink, marten, and beaver are also present. Queen Charlotte goshawks may also occur in the area (USDA- Forest Service, 2001).

(5) Management Direction and Current Uses: This area was allocated to five Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These five LUDs are Scenic Viewshed, Transportation and Utility System (TUS), Minerals, Semi-Remote Recreation, and Old-growth Habitat. Both the TUS and Minerals LUDs are secondary LUDs, which overlay the other land uses.

LUD	Acres
Scenic Viewshed	12,973
Minerals*	6,396
Transportation and Utility System	NA
Semi-Remote Recreation	3,011
Old-growth Habitat	691

* Note that acres in the Minerals LUD are included in the Scenic Viewshed and Old-Growth LUD acres.

Approximately 78 percent of this roadless area (not including the LUD overlays) was allocated to one development LUD, Scenic Viewshed. Approximately 38 percent of this roadless area was allocated to the Minerals LUD overlay, located primarily in the north. This roadless area also contains a proposed State Road Corridor (along the shoreline of Taku Inlet), which was designated to the Transportation and Utility System LUD.

Approximately 22 percent of the roadless area was allocated to non-development LUDs (Semi-Remote Recreation, Old-growth Habitat). Approximately 18 percent of this area was allocated to the Semi-Remote Recreation LUD. Old-growth Habitat LUD was assigned to approximately 4 percent of the roadless area.

Forest Trail 554 extends along the shoreline of the north portion of the area. There are no other developed recreation facilities in the area. One outfitter/guide reported using the area in 1999. This outfitter/guide reported taking 41 groups, with a total of 196 clients, fishing at Slocum Inlet. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that the Rhine Roadless Area is typically not heavily used for subsistence.

(6) Appearance (Apparent Naturalness): Overall, this roadless area has high scenic quality with a mostly natural appearing landscape. Existing modifications include the trail that follows the shoreline of the north portion of the area and the historic trail that extends from Taku Harbor to Taku Lake.

The Rhine Roadless Area is visible from Stephens Passage, which is a major transportation route, as well as from Taku Inlet and Gastineau Channel. The area is also visible from locations in the adjacent Taku-Snettisham Roadless Area, and the city of Juneau. Portions of the area are also visible from locations within the Admiralty Island National Monument - Kootznoowoo Wilderness. The area itself appears natural from these locations. The area's apparent naturalness is, however, affected by the transmission line corridors that border the area and appear to be part of the roadless area when viewed from some locations, especially from the nearby saltwater transportation corridors.

(7) Surroundings (External Influences): The Rhine Roadless Area is located on the Juneau mainland and is a relatively small part of a very extensive mainland roadless area that includes portions of western British Columbia. Electric transmission line corridors border the area to the north and south, with Taku Inlet forming the east boundary. The transmission line corridor that borders the area to the north separates it from the Taku-Snettisham Roadless Area. This section of the area is bordered by Stephens Passage to the west.
Boat traffic is common along Stephens Passage and the Taku River corridor and is visible from locations within the roadless area. The Taku Harbor State Marine Park, located to the south, is a popular anchorage for transient travel and for local boaters. During the summer months, there is frequent air traffic. The electric transmission line corridors that border the area are readily apparent to visitors accessing the area by saltwater and also to those accessing the north portion of the area via Trail 554. They are also visible from locations within the area.

(8) Attractions and Features of Special Interest: The opportunity for high quality fishing, especially in Slocum Inlet, may be considered an attraction to the area. The area contains no inventoried recreation places. Trail 554 follows the shoreline of the north portion of the area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The Rhine Roadless Area did not exist in 1989. At that time it was considered part of the much larger Taku-Snettisham Roadless Area (#302). The Rhine Roadless Area was created when electric transmission line construction separated this area from the majority of the Taku-Snettisham Roadless Area. The area located south of the Taku Inlet was dropped from the area between the Draft and Final SEIS because it was relatively small and isolated by the electric transmission line.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: Overall, this roadless area has a mostly natural appearing landscape. Existing modifications include the trail that follows the shoreline of the north portion of the area. The area's natural integrity and apparent naturalness is, however, affected by the transmission line corridors that border the area and appear to be part of the roadless area when viewed from some locations, especially from the nearby saltwater transportation corridors.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a moderate opportunity for solitude and primitive recreation within much of the area but one should expect to see occasional air and boat traffic, especially in the Stephens Passage and Taku Inlet areas. The adjacent electric transmission line corridors are also visible from a number of locations within the area. The character of the landforms allows visitors to feel remote from the sights and sounds of human activity in some locations. One outfitter/guide reported using the area in 1999. This outfitter/guide reported taking 41 groups, with a total of 196 clients, fishing at Slocum Inlet.

Travel within the area can be challenging (particularly in the north portion), requiring a high degree of mountaineering skills and experience. The presence of both black and brown bears also presents a degree of challenge and a need for woods skills and experience.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	14,405	86%
Roaded Natural (RN)	1,549	9%
Roaded Modified (RM)	720	4%

The roadless area contains one inventoried recreation place, which covers less than 1 acre.

ROS Class	# of Rec. Places*	Total Acres
SPNM	0	0
RN	1	<1
RM	0	0

The area contains no developed recreation sites. This area is within approximately 14 miles of two public recreation cabins around Turner Lake, which is northeast of the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

The inventoried roadless areas of the Tongass National Forest were rated according to this system in 1989 for the Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Rhine Roadless Area was part of the larger Taku-Snettisham Roadless Area and was, therefore, not given a rating. The Rhine Roadless Area was rated independently for this updated version of the Analysis of the Management Situation. Based on this re-evaluation, the area was given a rating of 18.

(4) Ecologic and Geologic Values: The Rhine Roadless Area is located on the mainland near Juneau and is part of a very extensive mainland roadless area that includes portions of western British Columbia. The Rhine Roadless Area comprises a very small portion of this larger area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not identify any of the VCUs that comprise this area as primary salmon or sportfish producers.

The Anadromous Waters Catalogue and Atlas (ADF&G, 1998) does not identify any anadromous fish-bearing streams in this area. Rhine Creek and Grindstone Creek are two minor streams in the north portion of the roadless area.

(b) Wildlife Resources: Generally, the roadless area provides good Sitka black-tailed deer, moose and mountain goat habitat, and these species are present. Other large mammal species include wolves, and both black and brown bear. Based on data compiled for the 1985 to 1994 time period, two of the VCUs that comprise the south portion of the area (VCUs 51 and 52) were identified in the third 25 percent of black bear harvest areas in the Tongass National Forest. A total of 31 black bears were harvested in these areas over this time period. The Rhine Roadless Area also encompasses a small section of VCU 32, which was allocated to the second 25 percent of black bear harvest areas, with a total harvest of 32 black bears over this period (ADF&G, 1998).

Furbearers such as mink, marten, and beaver are also present. The EIS for Helicopter Landing Tours of the Juneau Icefield indicates that all 13 of the Management Indicator Species identified in the Forest Plan occur within the study area for that project. That project area includes the north portion of the Rhine Roadless Area. Species identified in this larger area include marten, river otter, Sitka black-tailed deer, and Vancouver Canada goose. Queen Charlotte goshawk may also occur in the area (USDA Forest Service, 2001).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters, including Taku Inlet, which separates the two portions of the Rhine Roadless Area. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks, are closely associated with productive old growth. In addition, eight sensitive plant species are known or suspected to occur in the Juneau Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There is an unnamed glacier near Hawthorne Peak in the north portion of the area. There are no other known unique geologic features.

(5) Scientific and Educational Values: There are no known special features in this area and it has not been identified as an area of potential scientific value. The north portion of the area is adjacent to the city of Juneau and accessible via Trail 554, which follows the shoreline of the area. Therefore, the area is readily accessible to school-age children. The south portion of the area is also located in relatively close proximity to Juneau and is accessible via boat. It is also located adjacent to the community of Taku Harbor.

(6) Scenic Values: Overall**,** this roadless area has high scenic quality with a mostly natural appearing landscape. Existing modifications include the trail that follows the shoreline of the north portion.

This roadless area appears natural and unmodified from designated visual priority routes and use areas. The area's apparent naturalness is, however, affected by the transmission line corridors that border the area and appear to be part of the roadless area when viewed from some locations, especially from the nearby saltwater transportation corridors. Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: Stephens Passage, a part of the Alaska Marine Highway, a saltwater use area, a tour ship route and small

boat route; Taku Inlet, a small boat route; Gastineau Channel, a saltwater use area, a tour ship route and small boat route; Slocum Inlet and Taku Harbor, small boat routes and boat anchorages; Taku Harbor State Marine Park; and the communities of Taku Harbor and Juneau.

All of this area was inventoried in Variety Class A (possessing landscape diversity that is unique for the character type).

The Existing Visual Condition (EVC) of almost all of this roadless area, approximately 99 percent, is EVC I. These areas appear to be untouched by human activity.

(7) Social, Cultural, and Historical Values: The area has a long and varied history of use, dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. The Taku River is a travel corridor that has been used continually since the earliest human occupation of the area. Goldschmidt and Haas (1946) identified the sites of former villages at Bishop Point and on the west side of Sunny Cove, as well as a former smokehouse or cabin north of the village site near Sunny Cove. They also indicated that hunting or trapping and salmon harvest historically occurred in the Slocum Inlet area.

The north portion of the area is adjacent to the city of Juneau. The community of Taku Harbor is located adjacent to the south portion of the area.

Trail 554 extends along the shoreline of the north portion of the area. There are no other developed recreation facilities in the area. One outfitter/guide reported using the area in 1999. This outfitter/guide reported taking 41 groups, with a total of 196 clients, fishing at Slocum Inlet. Based on data compiled for the 1985 to 1994 time period, two of the VCUs that comprise the south portion of the area (VCUs 51 and 52) were identified in the third 25 percent of black bear harvest areas in the Tongass National Forest. A total of 31 black bears were harvested in these areas over this period. The Rhine Roadless Area also encompasses a small section of VCU 32, which was allocated to the second 25 percent of black bear harvest areas, with a total harvest of 32 black bears over this period (ADF&G, 1998).

The Tongass Fish and Wildlife Resource Assessment indicated that the Rhine Roadless Area is typically not used for subsistence. None of the VCUs in this area were included among the VCUs with highest sensitivity to disturbance of subsistence areas or in the highest, second or third most important groups for community use values (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The area is bounded in places by saltwater shoreline. However, much of the area's borders are formed by electric transmission line corridors that separate it from the adjacent Taku-Snettisham Roadless Area. Adjacent areas are primarily allocated to the Semi-Remote Recreation, Scenic Viewshed, Timber Production, and Modified Landscape LUDs. The Transportation and Utility System LUD follows the shoreline along the east side of the northern portion of the roadless area. Viewed on its own, the Rhine Roadless Area appears relatively small and irregularly shaped, with evidence of development apparent on its boundaries when viewed from nearby travel routes and use areas, as well as from within the area itself. It is not readily suited for wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: There is a possibility of developing public recreation cabins within the area. Outfitter and guide services could potentially increase in the future.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: No fish habitat enhancement projects are proposed in the roadless area.

(4) Wildlife Resources: No wildlife habitat enhancement projects are proposed in the roadless area.

(5) Timber Resources: There are 2,332 acres mapped as productive old growth and no acres mapped as second growth due to harvest in the roadless area. Of these acres, 1,436 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 335 acres or 2 percent of this roadless area are estimated to be suitable for timber production. Approximately 10 of the suitable acres are mapped as high-volume old growth and none of the suitable acres are mapped as high-volume, coarse-canopy old growth.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences in the area.

(7) Minerals: The area has been identified as having mineral development potential. According to the Tongass Land Management Plan Revision EIS (USDA Forest Service, 1997) portions of this area (in the northern part) lie within the Juneau Gold Belt, indicating mineral development potential for gold, silver, lead, zinc, and copper.

This area contains 6,429 acres of land identified as a mineral activity tract having a high potential for expanding mineral exploration or development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). A total of 6,396 of these acres are allocated to the Minerals LUD. The Minerals LUD is intended to encourage the prospecting, exploration, development, mining, and processing of locatable minerals in areas with the highest potential for minerals development. It is also intended to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when mineral development occurs. In addition, this area contains 16,131 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); however, they are considered to have low potential for development.

(8) Transportation and Utilities: A proposed state road corridor is located along the shoreline of the north portion of the area. This road corridor would extend from Juneau along Taku Inlet and River to Canada. Designating the Rhine Roadless Area Wilderness could affect this potential road because it would not be able to pass through the area. This potential road was not included in the March 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999).

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: This roadless area does not contain any designated or inventoried potential Research Natural Areas. There are no inventoried areas of scientific interest in the area.

(11) Land Use Authorizations: There is a Special Use Permit for a Federal Aviation Authority wind monitoring station at or adjacent to the northwest corner of the north portion of the roadless area. The Tongass Land Management Plan Revision EIS (USDA Forest Service, 1997) approved a communication site on Salisbury Ridge in the north portion of the roadless area. To date, this site has not been developed.

(12) Land Status: All land within the roadless area is part of the National Forest System. Encumbered lands within the roadless area are located just south of Sunny Cove.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Most use of the area is associated with recreational boating, hunting, viewing scenery and wildlife, and fishing. Some mining activities are also occurring. The majority of use occurs within one-quarter mile from the shoreline.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Rhine Roadless Area. In 2001, HR 2908 identified part of the south portion of the area as a proposed wilderness

addition. The remainder of the area was identified as a proposed LUD II addition. The bill also proposed that Taku Inlet receive Wild and Scenic River designation.

(c) Public Input During Forest Plan Revisions and Appeals: Parts of the Rhine Roadless Area were specifically addressed in public input received during the Forest Plan revision and appeal. A number of people commenting addressed Taku Inlet and River. The majority of comments requested that the scenic and recreation values of the Taku Inlet area take precedence over logging and other development activities, including the proposed transportation corridor. Another comment asked that road development or access not be restricted in this area.

One commenter requested that Slocum Inlet be managed under the Scenic Viewshed LUD because the area is visible from downtown Juneau. Another commenter asked that Taku Harbor be managed for its scenic and boating values and at a minimum allocated to the Scenic Viewshed LUD.

One commenter stated that Management Area (MA) C10, which encompasses part of the south portion of the area, should be managed as either Wilderness, Primitive Recreation, or Old Growth due to its high wildlife value. Timber industry comments, on the other hand, identified the western half of MA C10 as ideal for timber production and noted that managing the area under Scenic Viewshed or Modified Landscape LUDs would make it harder to develop. Another commenter requested that the coastline from Juneau to Snettisham be assigned to the Transportation and Utility Systems LUD.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: Comments on the July 2001 Helicopter Landing Tours on the Juneau Icefield 2002-2006 DEIS are presently being reviewed. The study area for the Juneau Icefield EIS includes the north portion of the Rhine Roadless Area.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended that Roadless Areas 301, 302, 305, and 313, which are largely contiguous, should be treated as one roadless area and should be recommended for wilderness and LUD II protection, as described in Alternative 6. They indicated that the area surrounding the population center should be protected by LUD II; these are important for recreation, subsistence, and tourism.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 301, 302, 305, and 313 as a contiguous complex of roadless areas that should be considered one roadless area and recommended it for permanent protection in a combination of wilderness and LUD II, as described in Alternative 6.

Some individuals requested long-term protection for Taku Harbor.

(2) Nearby Roadless and Wilderness Areas and Uses: The Rhine Roadless Area, formerly part of the Taku-Snettisham Roadless Area, is separated from other roadless areas by several electric transmission line corridors. The Admiralty Island National Monument - Kootznoowoo Wilderness is located directly west across Stephens Passage from the area. The Rhine Roadless Area comprises a small part of a large mainland roadless area that includes the Juneau-Skagway Icefields Roadless Area (#301) to the north and Tracy Arm-Fords Terror Wilderness to the south.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	10	15
Sitka (Pop. 8,835)	85	175
Hoonah (Pop. 860)	40	75
Angoon (Pop. 572)	45	105

The nearest stop on the Alaska Marine Highway is Juneau.

(4) Relative Contribution to the National Wilderness Preservation System: The Rhine Roadless Area is located on the Juneau mainland and is part of a very extensive mainland roadless area that includes portions of western British Columbia. The area occupies the north headland at the mouth of Taku Inlet. Electric transmission line corridors border this portion of the area to the north and south, with Taku Inlet forming the east boundary. The transmission line corridor that borders the area to the north separates it from the Taku-Snettisham Roadless Area. The area is mountainous with elevations reaching 4,210 feet. A number of drainages flow through the area to Taku Inlet. These drainages include Grindstone and Rhine Creeks. An unnamed glacier is located north of these drainages.
The relatively small Rhine Roadless Area is mostly unmodified, but influenced by the powerline corridors that shape its size and boundaries. The area has high natural integrity and moderate apparent naturalness. The opportunity for solitude and primitive recreation is moderate.

None of the landscape in this area is considered distinctive from a scenery standpoint. There are no known features of ecologic, geologic, scientific, or cultural significance in this area.

The roadless area includes about 123 acres of high-volume, old-growth forest. None of these acres are mapped as high-volume, coarse-canopy old growth.

The Rhine Roadless Area is classified as being in the Northern Coast Range Biogeographic Province and makes up about 2 percent of the province. It is one of six inventoried roadless areas found within the province; roadless areas make up about 73 percent of the province. Part of the Tracy Arm-Fords Terror Wilderness lies within this province and makes up about 23 percent of the province.

The Rhine Roadless Area lies completely within the Boundary Ranges Ecological Section; it represents 0.4 percent of the entire ecological section. Approximately 33 percent of this ecological section is represented by existing wilderness with an additional 62 percent in non-development LUDs (including 1 percent in LUD II).

The entire Rhine Roadless Area is within the Boundary Ranges Icefields Ecological Subsection; this portion of the roadless area represents about 0.4 percent of the entire ecological subsection. Approximately 32 percent of this ecological subsection is in existing wilderness, an additional 1 percent is in existing LUD II, and an additional 61 percent is protected by other existing non-development LUDs.

The Rhine Roadless Area was rated 18 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 84th from the highest (along with 8 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the roadless area in an unroaded condition, and some support for designating the area as a wilderness. Designation would create a relatively small wilderness with no significant ecologic, geologic, scientific, or cultural features. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low.

V. Environmental Consequences

The Rhine Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 22 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 78 percent of the roadless area. The land in the development LUDs includes an estimated 335 acres that are suitable for timber production (2 percent of the suitable acres on the Juneau Ranger District). None of the suitable acres are classified as high-volume, coarse-canopy acres. This area contains 6,429 acres of land identified as a mineral activity tract having a high potential for expanding mineral exploration or development of locatable minerals. A total of 6,396 of these acres are allocated to the Minerals LUD. This area also contains an estimated 16,131 acres of undiscovered locatable mineral resources that are considered to have low potential for development. Evaluations for expansion of the State road system would continue. Electronic and Coast Guard special use permits would continue. The values associated with the natural settings of the roadless area could be affected by the timber management activities allowed by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. In the Recommended LUD II areas, recreation, special uses, and minerals programs would continue similar to current conditions with little restriction. No timber harvest would be allowed. Evaluations for expansion of the State road system would continue. Electronic and Coast Guard special use permits would continue. The values associated with the natural settings of the roadless area would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. The electronic and Coast Guard special use permits would likely continue. No timber harvest would be allowed. Other activities would be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 313 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								16,675
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	691	691	691	691	691		691	
Semi-remote Recreation	3,011	3,011	3,011	3,011	3,011		3,011	
Recommended LUD II						16,675		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	12,973	12,973	12,973	12,973	12,973		12,973	
Modified Landscape								
Timber production								
TOTAL	**16,675**	**16,675**	**16,675**	**16,675**	**16,675**	**16,675**	**16,675**	**16,675**
Suitable Timber Lands	335	335	335	335	335	**0**	335	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Point Craven (314)

ACRES (NFS): 10,961

BIOGEOGRAPHIC PROVINCE: East Chichagof Island

ECOLOGICAL SECTION: Baranof-Chichagof Fjordlands, Northeast Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 18

I. Overview and Description

(1) Location and Access: The Point Craven Roadless Area is located on East Chichagof Island. Sitkoh Bay and an area of forest roads and associated developments border the area to the northeast and east. Similarly, developed areas border the area to the north and west. Peril Strait and developed areas border the area to the south. Sitkoh Lake is located in the area. The nearest communities are Angoon, approximately 12 miles east across Chatham Strait from the area, and Tenakee Springs, about 20 miles to the north. The closest larger community is Juneau located approximately 60 miles northeast of the area. Angoon, Tenakee Springs, and Juneau are all served by the Alaska Marine Highway.

Access to the area is by boat or floatplane. Roads along the border to the north, east, south, and west provide foot or vehicle access to the edges of the area. All-terrain vehicles (ATV) use these roads.
Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: The oldest known site within the Point Craven Roadless Area dates to approximately 3,000 BP. This date may be pushed back by future field investigations. This area was apparently used by Native peoples from the Sitka, Hoonah, and Angoon areas. A permanent village was located at Point Craven, with seasonal sites located in Sitkoh Bay and on the coast. Tlingits fleeing Sitka after the 1804 battle with the Russians, may have retreated to the Point Craven area, where a community of up to 1,000 people was established.

Early European entries were tied to hunting and exploration. Lt. Lisiansky of the Russian Navy mapped the Peril Strait area in 1805. Peril Strait was important then, as now, for access to the inland waterways that provide protected north-south water travel, as well as for access to the inland islands. The primary activities in this area have remained fishing, hunting, and fur gathering. Fish canneries and traps were important in the whole area in the early 20th Century, generally replacing fur gathering as furs became both more scarce and less of an economic factor. A cannery was located within this roadless area on Sitkoh Bay.

Recent activities include ongoing development and associated management activities along all sides of the area. Sitkoh Bay and Sitkoh Creek are heavily used by sport and subsistence fishers.

(3) Geography and Topography: The topography of this area is typical of most of the island areas. It is characterized by narrow river valleys, surrounded by mountains. Terrain relief ranges from sea level to more than 2,600 feet in elevation. The mountains are steep and highly dissected by streams. Terrain features are such that stream runs are relatively short, with a high gradient. Because of this, broad river valleys have not developed. The one exception is Sitkoh Creek and the lower reaches of its tributaries on the northern boundary of the evaluation area. There are several small lakes scattered about the area, generally above the 1,000-foot elevation. Sitkoh Lake lies to the north, partially within the Point Craven Roadless Area.

Other terrain features in this area include approximately 222 acres of alpine, 1 acre of rock and no acres of ice or snow features. There are 5 miles or saltwater shoreline and 1 acre of islands.

(4) Ecosystem:

(a) Classification: Biogeographic Province. This area is located within the East Chichagof Island Biogeographic Province. This province has a dryer and colder climate than the outer coast of Chichagof Island and the winter snow pack is generally greater. Chichagof Island is deeply dissected into three peninsulas that may be functioning biologically more like separate islands. Vegetation in this province represents a modal condition similar to Admiralty Island Province.

Ecological Section/Subsection. The Point Craven Roadless Area is contained within the Baranof-Chichagof Fjordlands (M247B) and Northeast Chichagof Fjordlands Ecological Sections (M247C). These areas are represented by two ecological subsections (see table below). The lithology of Kook Lake Carbonates Ecological Subsection is primarily comprised of intrusive igneous and locally metamorphosed rocks and secondarily of limestone and marble. Inland, mineral soils with distinct organic layers dominate. Higher elevations support small alpine vegetative communities and the moderately sloped mountains support productive hemlock-spruce forests. The Peril Strait Granitics Ecological Subsection is characterized by well-rounded granodiorite and gabbro rocks with few slivers of marble. Alpine barrens and meadows are common atop the mountains, and brush fields are found on the upper slopes. Torrential debris flows are common in this area, producing colluvial cones that support productive hemlock-spruce forests. Mid- and low gradient streams have broad floodplains that also support productive forests (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Northeast Chichagof Fjordlands	Kook Lake Carbonates	59%
Baranof-Chichagof Fjordlands	Peril Strait Granitics	41%

(b) Soils: Glacial activity, combined with basically sedimentary bedrock, are primary factors in soil development in this roadless area. Other factors are high rainfall, cool summer temperatures, and a short growing season. Because of rainfall, many soils are highly leached. Dense vegetative growth, combined with a slow breakdown of organic matter, leaves a thick duff layer on most of the subalpine soils.

The soils are highly variable and range from exposed bedrock and very shallow, poorly developed soils in the higher elevations to fluvial and colluvial deposits in the river bottoms. There are large areas of deep supersaturated or inundated organic soils (muskeg) over much of the area, particularly at elevations above 1,000 feet. The steeper slopes are generally well drained, shallow, moderately productive soils. The stream bottoms are generally better soils, well to poorly drained, and highly productive.

(c) Vegetation: Dense western hemlock-Sitka spruce forests dominate the overstory, with an understory of shrubs, such as red huckleberry, rusty menziesia, and devil's club, and a forest floor that is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Muskegs, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low elevation timber stands where drainage is restricted. Trees are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar. Approximately 319 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

At elevations above about 2,000 feet, alpine plant communities (222 acres) are characterized by low shrubs, grasses, and sedges. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 10,048 acres mapped as forest land of which 6,907 acres or 69 percent are mapped as productive old-growth forest. Of the productive old growth, 2,423 acres (35 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 109 acres of high-volume,

coarse-canopy old growth. There are 32 acres of second growth forest where timber harvest has occurred in the past.

(d) Fish Resources: Sitkoh Creek and parts of two unnamed Class I streams lie within this roadless area. There are four Pacific salmon (sockeye, coho, pink, and chum) valuable for commercial, subsistence, and sport fishing that spawn and rear in these waters. In addition, steelhead trout, anadromous cutthroat trout, Dolly Varden char, stickleback, and smelt inhabit the area.

(e) Wildlife Resources: Wildlife species present in this roadless area include brown bear, Sitka black-tailed deer, pine marten, mink, and land otter, as well as smaller mammals and several amphibians. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island. There are relatively few resident bird species; however, the area is used by many migratory species. Eagles are common in the coastal zone. A goshawk nest was identified in Sitkoh Bay, and that area is also heavily used by marbled murrelets (USDA Forest Service, 1999).

(5) Management Direction and Current Uses: This area was allocated to four different Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. The four LUD areas are Timber Production, Scenic Viewshed, Modified Landscape, and Old-growth Habitat.

LUD	Acres
Timber Production	4,224
Scenic Viewshed	1,032
Modified Landscape	276
Old-growth Habitat	5,430

Approximately 50 percent of this roadless area was allocated to development LUDs (Timber Production, Scenic Viewshed, and Modified Landscape). The Timber Production LUD was assigned to approximately 39 percent of this roadless area. Near Lindenburg Head, approximately 9 percent of the roadless area was allocated to the Scenic Viewshed LUD. Along Sitkoh Bay, approximately 3 percent of the roadless area was allocated to the Modified Landscape LUD.

Approximately 50 percent of this roadless area was allocated to one non-development LUD, Old-growth Habitat.

Forest Service management activities within the roadless evaluation area have been limited to permit administration. A Public Recreation Cabin (Sitkoh Lake East) is located on the east side of Sitkoh Lake within the boundaries of the roadless area. A second cabin, Sitkoh Lake West, is located immediately west of the area. The Sitkoh Lake hiking trail extends from Sitkoh Bay along Sitkoh Creek. Outfitter/guide use was reported at two locations in this roadless area in 1999. A total of 17 groups and 75 clients were reported. Outfitter/guide use activities included fishing and hiking. Subsistence use occurs in the area.

Timber management and associated developments are ongoing along parts of the north, east, south, and west borders of the area. The entire roadless area was historically within Management Area 6 of the Alaska Pulp Corporation (APC) Long-Term Timber Sale Contract area.

(6) Appearance (Apparent Naturalness): The area generally appears natural and unmodified. However, the boundaries adjacent to developed areas (about 80 percent of the boundary) appear highly modified. Viewed from Florence Bay and Sitkoh Bay, this area provides a natural background to the developments that have occurred in adjacent areas. This is also the case from parts of Peril Strait, where developments have occurred in the foreground. Once in the roadless area, the scenery is natural appearing.

(7) Surroundings (External Influences): There are several non-National Forest System tracts within, but excluded from, the roadless area. These are located north of Point Craven, on Sitkoh Bay at Chatham Strait, and just northwest of Chatham Strait. Peril Strait, which partially borders the area to the south, is the Alaska Marine Highway route connecting Sitka with the rest of Southeast Alaska. During the summer months there are approximately ten weekly ferry passages that pass the Point Craven Roadless Area. Peril Strait is also used by cruise ships and tour boats. This Strait is the major connecting corridor between the west side of Baranof and

Chichagof Islands and the inland waterways. Therefore, it is popular with sport and commercial fishing boats, as well as supporting barge traffic. Sitkoh Bay gets pleasure and commercial fishing craft use. Once away from the coastal areas, the rugged terrain provides some protection from surrounding activities. High altitude overflights by commercial airliners (approximately six per day) and occasional small floatplane flights are also apparent in the area.

(8) Attractions and Features of Special Interest: Although the wildlife and natural beauty of the area are attractions, there is little to distinguish the Point Craven Roadless Area from many other areas. Basic attractions are the opportunity to "get away from it all" (solitude), sportfishing, and hunting. The area contains four inventoried recreation places, which cover 1,416 acres, or 13 percent of the roadless area. A public recreation cabin (Sitkoh Lake East) is located on the east side of Sitkoh Lake. A hiking trail leads from Sitkoh Bay to this cabin along the northern edge of the area.

Features of special interest in the area may be the diverse cultural resource sites in the general area; however, there are no interpretative or information programs at present.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: There is an area of non-National Forest System lands located north of Point Craven that is excluded from the 2003 area. A second smaller area of non-National Forest System land located on the northeast shore is also excluded from the boundaries of the 2003 area. These areas were part of the 1989 area. In addition, the buffers around existing roads have been adjusted slightly since 1989. Several smaller areas were excluded from the area between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: This roadless area is unmodified except for minor activities, such as tent frames, and for early cabin and campsites including those where early Native activity occurred. Most of the early sites have now deteriorated and grown over, making them apparent only with close examination. Existing cabins/camps are fairly unobtrusive and infrequent, and do not detract from the natural integrity of the total area. Overall, the area has relatively high natural integrity and moderate apparent naturalness. The highly modified areas surrounding this roadless area coupled with its relatively small size may reduce the suitability of this natural appearing area for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The opportunity for solitude is moderate and the opportunity for primitive recreation is somewhat higher. Once away from the coastal areas, the rugged terrain provides for protection from surrounding activities. High altitude overflights by commercial airliners (approximately six per day) and occasional small aircraft flights may provide some distraction.

Outfitter/guide use was reported at two locations in this roadless area in 1999. A total of 17 groups and 75 clients were reported. Outfitter/guide use activities included fishing and hiking.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	9,404	86%
Semi-Primitive Motorized (SPM)	423	4%
Roaded Modified (RM)	1,133	10%

The area contains four inventoried recreation places, which cover 1,416 acres, or 13 percent of the roadless area.

ROS Class	# of Rec. Places	Total Acres
SPNM	1	1,141
SPM	0	0
RM	4	274

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

A Public Recreation Cabin (Sitkoh Lake East) is located on the east side of Sitkoh Lake within the boundaries of the roadless area. A second cabin, Sitkoh Lake West, is located immediately west of the area. The Sitkoh Lake hiking trail extends from Sitkoh Bay along Sitkoh Creek.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Point Craven Roadless Area was 21 out of 28 possible points, with a separate rating given to a portion of the area which scored 22. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 18. The roadless area has been slightly reduced in size since 1989 and management activities are ongoing in adjacent developed areas, which has affected the rating.

(4) Ecologic and Geologic Values: This roadless area is located on the east side of Chichagof Island. The area is separated from other nearby roadless areas, Chichagof (#311) and Trap Bay (#312), by developed areas.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed two of the three VCUs, Sitkoh Bay (243) and False Island (245), as primary salmon producers, and the third VCU, Sitkoh Creek (244), as a primary sportfish producer.

There are four Pacific salmon (sockeye, coho, pink, and chum) valuable for commercial, subsistence, and sport fishing that spawn and rear in these waters. In addition, steelhead trout is a favored sportfishing species. The steelhead run in Sitkoh Creek is considered valuable. Annual peak escapement of pink salmon in Sitkoh Creek is 79,000 (USDA Forest Service, 1999). Other species include Dolly Varden char, anadromous cutthroat trout, stickleback, and smelt. Sitkoh Creek is listed among the ADF&G 65 "Important" watersheds for its fish values. Sitkoh Lake and Creek provide rearing habitat for juvenile sockeye salmon. The Anadromous Waters Catalogue (ADF&G, 2000) also shows two unnamed fish-bearing streams in this area providing habitat for coho, pink, and chum salmon.

(b) Wildlife Resources: Wildlife species present in this roadless area include brown bear, Sitka black-tailed deer, pine marten, mink, and land otter, as well as smaller mammals and several amphibians. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island. There are relatively few resident bird species; however, the area is used by many migratory species. Eagles are common in the coastal zone. The area may receive some migratory use by the peregrine falcon. A goshawk nest was identified in Sitkoh Bay, and that area is also heavily used by marbled murrelets (USDA Forest Service, 1999). Sport and subsistence deer hunting is very important in this area.

Based on harvest data compiled from 1985 to 1995, one of the three VCUs located in this area (VCU 243) was ranked in the top 25 percent of brown bear harvest areas on the Tongass (ADF&G, 1998).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks, are closely associated with productive old growth. A goshawk nest was identified in Sitkoh Bay (USDA Forest Service, 1999). In addition, 12 sensitive plant species are known or suspected to occur in the Sitka Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are 41 acres, less than 1 percent of the area, of known low vulnerability karst or cave resources in this roadless area south of Sitkoh Lake in the western portion. There are no known glaciers or unique geologic features.

(5) Scientific and Educational Values: Although a high probability for numerous cultural resource sites exists, little study has been done. There are five known or suspected (unconfirmed) sites, dating back about 3,000 years. Future surveys may find sites contemporary with older sites in the general area and may add substantially to knowledge of pre-European culture. Most known sites are located in the coastal zone. Further field investigation may reveal an opportunity to add to the pool of scientific or ecological knowledge for other resources; however, current indications are that there is nothing unique about the area.

There are no Research Natural Areas in the Point Craven Roadless Area. Angoon, located approximately 12 miles east across Chatham Strait from the area, is the closest community with school-age children. Sitka, located approximately 30 miles south, is the closest larger community.

(6) Scenic Values: The area is largely unmodified with a visual character type of Admiralty-Chichagof. Landforms are generally rounded, low mountains. Rocky shorelines, interspersed with gravel beaches, are found along Sitkoh Bay and Peril Strait. Streams, with the exception of Sitkoh Creek, are short and swift, flowing directly to saltwater. Small bays and estuaries are present and show a range of visual characteristics. Lower slopes are densely vegetated and are interspersed with muskeg and small lakes. Upper slopes appear bare from a distance, but often contain muskeg, alpine tundra vegetation, and scattered tree cover. There are some areas along the coastline where beach logging has occurred in the past. These areas are relatively unobtrusive and do not generally detract from the naturalness. There are no other readily apparent signs of human activities within the area itself. However, the boundaries adjacent to the developed areas (about 80 percent of the boundary) appear highly modified.

Viewed from Florence Bay and Sitkoh Bay, this area provides a natural background to the developments that have occurred in adjacent areas. This is also the case from parts of Peril Strait, where developments have occurred in the foreground. Once in the roadless area, the scenery is natural appearing.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include: Chatham Strait and Peril Strait (Alaska Marine Highway, tour ship routes, and small boat routes); Sitkoh Creek (dispersed recreation area); Florence Bay (saltwater use area); the East Sitkoh Lake recreation cabin (public recreation cabin); and the Sitkoh Lake Trail (#553) (hiking trail).

Approximately 82 percent of this roadless area was inventoried as Variety Class B (possessing landscape diversity that is common for the character type). About 18 percent of the roadless area is Variety Class C (possessing a low degree of landscape diversity).

The majority of the area, approximately 74 percent, was inventoried in Existing Visual Condition (EVC) I, which appears untouched by human activity. Approximately 1 percent was inventoried as EVC IV, where changes in the landscape are easily noticed by the average visitor and may attract some attention. Twenty-four percent was inventoried as EVC V, where changes to the landscape are obvious to the average visitor. Approximately 2 percent of the area was inventoried as EVC VI, where changes in the landscape are in glaring contrast to the natural landscape.

(7) Social, Cultural, and Historical Values: The oldest known site within the Point Craven Roadless Area dates to approximately 3,000 BP. This date may be pushed back by future field investigations. This area was apparently used by Native peoples from the Sitka, Hoonah, and Angoon areas. A permanent village was located at Point Craven, with seasonal sites located in Sitkoh Bay and on the coast. Tlingits fleeing Sitka after the 1804 battle with the Russians, may have retreated to the Point Craven area, where a community of up to 1,000 people was established.

Early European entries were tied to hunting and exploration. Lt. Lisiansky of the Russian Navy mapped the Peril Strait area in 1805. Peril Strait was important then, as now, for access to the inland waterways that provide protected north-south water travel, as well as for access to the inland islands. The primary activities in this area have remained fishing, hunting, and fur gathering. Fish canneries and traps were important in the whole area in the early 20th Century, generally replacing fur gathering as furs became both more scarce and less of an economic factor. A cannery was located within this roadless area on Sitkoh Bay. Sitkoh Bay and Sitkoh Creek are heavily used by sport and subsistence fishers.

A Public Recreation Cabin (Sitkoh Lake East) is located on the east side of Sitkoh Lake within the boundaries of the roadless area. Subsistence use occurs in the area. One of the VCUs partially located within this area (VCU 244) was included among the VCUs with highest community use value. This VCU includes Sitkoh Lake, which is only partially located within the Point Craven Roadless Area. The two other VCUs partially located within the area (VCUs 243 and 245) were included in the second tier of highly valued community use areas. None of the VCUs were listed among the VCUs with highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: Manageability of this area as wilderness is low. Sitkoh Bay and an area of developments border the area to the northeast and east. Developments also border the area to the north and west. Peril Strait and an area with developments border the area to the south. While the effects of current activities are minimal because they are transitory in nature, past developments may detract from the majority of the boundary of the roadless area. However, these areas may provide better access into the interior of the area.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: The potential exists to enhance recreation opportunities in this area; however, the opportunity for development of anything other than a trail system seems to be low. The presence of the East Sitkoh Lake Cabin, and the absence of any distinguishing features, would limit management needs for development in the area. There are opportunities for interpretative activities associated with the cultural and historical sites. The potential is considered high for a significant increase in permits for outfitter/guides in the Sitkoh Creek area.

In 1996, the Alaska Visitors Association (AVA) proposed the following recreation developments for Sitkoh Bay and Sitkoh Lake: day-use recreation facility for 150 persons, a day-wildlife observatory for 30 persons, a backcountry recreation lodge for 50 persons, and a small cruise ship shore-walk for 25 persons.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: There are no fish habitat enhancement projects identified for this roadless area at this time.

(4) Wildlife Resources: There are no wildlife habitat improvement projects planned for this area.

(5) Timber Resources: There are 6,907 acres mapped as productive old growth in the roadless area. There are also 32 acres of second growth where timber harvest has occurred in the past. Of these acres, 3,469 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 895 acres or 8 percent of this roadless area are estimated to be

suitable for timber production. Approximately 192 of the suitable acres are mapped as high-volume old growth; of these acres, less than 10 are mapped as high-volume, coarse-canopy old growth.

This area was historically part of the Alaska Pulp Corporation Long-Term Contract Area. The potential for managing timber in this roadless area is high. The evaluation area is partially roaded on all four sides and has a reasonable potential for future road development. Large areas of mature-overmature timber that meet operability criteria, coupled with accessibility from existing road systems, make timber harvest a viable proposition. This area is within the False Island Timber Sale planning area scheduled for analysis beginning in 2002.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: The development potential for locatable minerals is estimated to be low or non-existent in this area. No known mining claims exist.

(8) Transportation and Utilities: There are no proposed transportation or utility corridors within or adjacent to this area.

(9) Water Availability and Use: The public recreation cabin at Sitkoh Lake is the only facility within this roadless area that creates a demand for water. There are no existing or planned hydroelectric or domestic water projects in the area.

(10) Areas of Scientific Interest: The mapped karst resources encompass approximately 41 acres or less than one percent of the roadless area. There are no other known areas of scientific interest in this roadless area.

(11) Land Use Authorizations: No special use permits have been issued for use of this roadless area; however, the area is commonly used by outfitter/guides. There is one structure, located on private land on Sitkoh Bay that is partially on the National Forest. Probable future permits would be for subsistence or recreational facilities or for outfitter/guide services. The potential is considered high for a significant increase in permits for outfitter/guides in the Sitkoh Creek area.

(12) Land Status: All of this roadless area is National Forest System land. Encumbered land within the roadless is located on Point Craven and along Sitkoh Bay. There are two parcels of private land located within the boundaries, but these are excluded from the roadless area.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The nearest communities are Tenakee Springs (population 104), about 25 water miles to the north, and Angoon (population 572), 12 miles to the east. Sitkoh Bay is the primary site for use in the general area. Activities are primarily subsistence hunting and fishing; there is some sport fishing, particularly for steelhead trout. These activities do not necessarily take place in the roadless area. The heaviest subsistence use is indicated to be from Angoon.

There has been strong concern expressed about the ability to maintain subsistence use in the Sitkoh Bay area. This concern is tied to a desire to restrict timber harvest around Sitkoh Bay and the adjacent outside coastline.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Point Craven Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also proposed that Sitkoh Creek be protected as a Wild and Scenic River. The majority of the developed areas that partially border the area to the north, east, south, and west were identified as “roaded areas available for logging.” Other areas where timber harvest has occurred along the perimeter were identified for protection as Restoration Areas.

(c) Public Input During Forest Plan Revisions and Appeals: Parts of the area were specifically mentioned in public input provided during the Forest Plan revisions and appeals. Sitkoh Bay was identified as an area that is highly important for commercial fishing, year-round recreation, and subsistence use and should be protected from further timber harvest. Sitkoh Bay was identified as a traditional use area for the people of Angoon. Commenters stated that existing roads should be closed to maintain subsistence opportunities in this area. Timber industry representatives requested that Management Area (MA) C37, which includes the Point Craven Roadless Area, be managed for timber production. Another commenter requested that logging not be permitted in MA C37 and other nearby areas until future tourism resources are assessed. The Sierra Club Juneau Group requested that no roads be built in this area. The Sitka Area State Park Advisory Board requested that MA C37 be managed to emphasize subsistence and wildlife. The AVA proposed the following recreation developments for Sitkoh Bay and Sitkoh Lake: day-use recreation facility for 150 persons, a day-wildlife observatory for 30 persons, a backcountry recreation lodge for 50 persons, and a small cruise ship shore-walk for 25 persons.

The area was also mentioned in a number of appeals including the following. The appeal filed by the Hoonah Indian Association et al. requested that logging not be permitted along the "stretch of lands and islands on both sides of the various narrows that span from Sitka Sound to Hoonah Sound" because the subsistence harvest of deer in this area "already exceeds the sustainable hunting level by a wide margin" and logging would exacerbate this situation. This appeal also identified west Chatham Strait as a customary and traditional hunting and fishing area for Angoon and expressed concern that the alternatives presented in the Forest Plan did not adequately protect this area from logging.

The appeal filed by the Sitka Conservation Society (SCS) noted its support of the "Citizens proposal" that identified a number of rivers in the Chatham/Sitka area, including Sitkoh Creek, for Wild and Scenic River designation. The SCS appeal also requested that lands allocated to the Scenic Viewshed LUD along Peril Strait be reallocated to the Old-growth Habitat LUD. The appeal filed by the Prince of Wales Conservation League identified south Chichagof Island as an area where the location and distribution of roadless reserves for brown bear habitat should be re-evaluated.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area was included in the project area of the Southeast Chichagof Landscape Analysis (USDA Forest Service, 1999). There were no public comments on this document.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 314 for permanent protection as LUD II.

SEACC recommended Point Craven for LUD II designation.

(2) Nearby Roadless and Wilderness Areas and Uses: The Admiralty Island National Monument-Kootznoowoo Wilderness is located approximately 15 miles across Chatham Strait from the Point Craven Roadless Area. The West Chichagof-Yakobi Wilderness is located approximately 45 miles west of the area.

Adjacent roadless areas include Chichagof (#311) (to the north and west, separated from the Point Craven Roadless Area by developed areas) and North Baranof #330 (across Peril Strait to the south). Other roadless areas in the general area include Trap Bay (#312), North Kruzof (#326), Hoonah Sound (#328), and Sitka Urban (#331).

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	60	90
Sitka (Pop. 8,835)	30	65
Hoonah (Pop. 860)	45	70
Angoon (Pop. 572)	12	12

The closest Alaska Marine Highway terminals are at Angoon, Tenakee Springs, Hoonah, and Sitka. Commercial airline service is available in Sitka.

(4) Relative Contribution to the National Wilderness Preservation System: The Point Craven Roadless Area is located on east Chichagof Island. Sitkoh Bay and an area of forest roads and associated developments border the area to the northeast and east. Similarly, developed areas border the area to the north and west. Peril Strait and developed areas border the area to the south. The topography of the Point Craven Roadless Area is characterized by narrow river valleys, surrounded by mountains. Terrain relief ranges from sea level to more than 2,600 feet in elevation. The mountains are steep and highly dissected by streams. Because of this, broad river valleys have not developed. The one exception is Sitkoh Creek and the lower reaches of its tributaries on the northern boundary of the evaluation area. There are several small lakes scattered about the area, generally above the 1,000-foot elevation. Sitkoh Lake lies to the north, partially within the Point Craven Roadless Area.

The area generally appears natural and unmodified; however, the boundaries adjacent to developed areas (about 80 percent of the boundary) appear highly modified. This is also the case from parts of Peril Strait, where developments have occurred in the foreground. Overall, the area has relatively high natural integrity and moderate apparent naturalness. The opportunity for solitude is moderate and the opportunity for primitive recreation is somewhat higher.

None of the landscape in this area is considered distinctive from a scenery standpoint. The area has some localized zones of karst development south of Sitkoh Lake. It also has several known cultural sites, some dating back to nearly 3,000 years.

The roadless area includes about 2,423 acres of high-volume, old-growth forest. Of these acres, approximately 109 are mapped as high-volume, coarse-canopy old growth.

The Point Craven Area is classified as being in the East Chichagof Island Biogeographic Province. This small roadless area is located on a peninsula on the southern tip of the province and makes up about one percent of the province. It is one of 12 inventoried roadless areas found in the province that collectively make up about 72 percent of the province. Most of the islands in Icy Strait that comprise the Pleasant-Lemesurier-Inian Islands Wilderness are also located within this province, as is a very small portion of the West Chichagof-Yakobi Wilderness. The portions of the two wildernesses make up approximately 6 percent of the province. The province also includes all or portions of three LUD II areas, which make up approximately 25 percent of the province.

The Point Craven Roadless Area lies within two ecological sections; it represents 0.2 percent of the Baranof-Chichagof Fjordlands Ecological Section and 1 percent of the Northeast Chichagof Fjordlands Ecological Section. The Baranof-Chichagof Fjordlands Ecological Section is well represented by existing wilderness and non-development LUDs (28 and 35 percent, respectively) with an additional 13 percent in LUD II. The Northeast Chichagof Fjordlands Ecological Section is well represented in non-development LUDs (26 percent) and a small portion (7 percent) is within LUD II.

The majority of this roadless area (59 percent) is within the Kook Lake Carbonates Ecological Subsection; this portion of the roadless area represents 6 percent of the entire ecological subsection, which is well represented in other non-development LUDs (31 percent, including 15 percent of LUD II). The remainder of the roadless area (41 percent) is located within the Peril Strait Granitics Ecological Subsection. This portion represents 2 percent of the entire ecological subsection, which is well represented in other non-development LUDs (40 percent, including 25 percent of LUD II).

The Point Craven Roadless Area was rated at 18 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 84th from the highest (along with 8 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the roadless area in an unroaded condition, but there has been little support for designating the area as wilderness. Designation would create a small wilderness nearly surrounded by developed areas and would not include any outstanding or unique wilderness values. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low.

V. Environmental Consequences

The Point Craven Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 50 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 50 percent of the roadless area. The land in the development LUDs includes an estimated 895 acres that are suitable for timber production (2 percent of the suitable acres on the Sitka Ranger District). Approximately 5 of the suitable acres are classified as high-volume, coarse-canopy old growth. The potential for mineral development is very low. The values associated with the natural settings of the roadless area could be affected by ongoing developments allowed by the Forest Plan. The cultural and karst values are protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and recreation developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the cultural and karst values, would be provided long-term protection if designated LUD II.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. The potential for development, including recreation, mineral, and timber management, would be significantly restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the cultural and karst values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 314 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								10,961
Wilderness								
Recommended Wilderness Nat. Mon								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	5,430	5,430	5,430	5,430	5,430		5,430	
Semi-remote Recreation								
Recommended LUD II						10,961		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	1,032	1,032	1,032	1,032	1,032		1,032	
Modified Landscape	276	276	276	276	276		276	
Timber production	4,224	4,224	4,224	4,224	4,224		4,224	
TOTAL	10,961	10,961	10,961	10,961	10,961	10,961	10,961	10,961
Suitable Timber Lands	895	895	895	895	895	0	895	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Point Augusta (317)

ACRES (NFS): 15,629

BIOGEOGRAPHIC PROVINCE: East Chichagof Island

ECOLOGICAL SECTION: Northeast Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 19 (20)

I. Overview and Description

(1) Location and Access: The Point Augusta Roadless Area is located on the northeastern coast of Chichagof Island. The roadless area is approximately 10 air miles from Hoonah. Whitestone Harbor is near the northwestern corner. Icy and Chatham Straits lie to the north and the east respectively. False Bay lies to the southeast and the Hoonah road system borders the roadless area in the south and west. There is regularly scheduled small plane and Alaska Marine Highway ferry service to Hoonah. The roadless area can be accessed via saltwater or from roads in the south and west. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout the general area. Point Augusta was named after the King of England's daughter by Captain Vancouver in 1794.

(3) Geography and Topography: The Point Augusta Roadless Area has rounded mountains and long flowing streams. There are 15 miles of shoreline on saltwater and 347 acres of alpine tundra. There are no offshore islands or ice or rock features mapped in the roadless area. The elevation ranges from sea level to nearly 2,500 feet.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The Point Augusta Roadless Area is classified in the East Chichagof Island Biogeographic Province. This province has a dryer and colder climate than the outer coast of Chichagof Island and the winter snow pack is generally greater. Chichagof Island is deeply dissected into three peninsulas that may be functioning biologically more like separate islands. Vegetation in this province represents a modal condition similar to Admiralty Island Province.

Ecological Section/Subsection. The Point Augusta Roadless Area is contained entirely within the Northeast Chichagof Fjordlands Ecological Section (M247C). This area is represented by one ecological subsection (see table below). The Freshwater Bay Carbonates Ecological Subsection has a bedrock mixture of carbonate and noncalcareous sedimentary rocks with bits of volcanic and intrusive igneous rocks. Many formations of almost pure carbonate form impressive mountains and ridges with extensive areas of exposed rocks containing pits and sinkholes. Atop the mountains, alpine vegetative communities thrive. The mid to lower elevations of the moderately sloped mountains have well drained soils that support productive hemlock spruce forests. In the valleys where glacial tills and glaciomarine sediments exist, non-forested wetlands are present. Where streams flow through calcareous colluvium, rich calcareous fens develop at the stream base creating a diverse and rare plant community (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Northeast Chichagof Fjordlands	Freshwater Bay Carbonates	100%

(b) Soils: In the Point Augusta Roadless Area, the development of soils is influenced by high levels of rainfall, cool summer temperatures, a short growing season, and moderately low soil temperatures. Under such conditions, organic matter decomposes slowly and tends to accumulate in areas where it is being produced or deposited.

Shallow soils with good drainage in this roadless area develop on steeper slopes due to rapid loss of material by erosion and efficient rainwater runoff. Deep, well-drained soils occur below shallow soils on gentler slopes where transported soil materials have collected.

Poorly-drained soils are associated with low relief and impermeable subsurface layers. In locations with poor drainage, deep organic soils (muskegs) tend to form. This situation occurs where the soil material fails to provide sufficient internal drainage or where topography prevents external drainage. Drainage improves with increased slope gradient; however, as slopes become oversteepened, soil depths become mush shallower. In riparian areas, soil zones tend to contain sand and gravels as a result of floods depositing them.

(c) Vegetation: Western hemlock-Sitka spruce forests dominate the overstory of this area. The understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants. Approximately 597 acres of muskeg are mapped in this area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Alpine vegetation dominates areas above 2,000 feet.

There are approximately 14,204 acres of forested land, of which approximately 9,246 acres or 65 percent are mapped as productive old growth. Of the productive old growth, 2,824 acres or 31 percent are mapped as high-volume old-growth forest. The productive old growth includes about 407 acres of high-volume, coarse-canopy old growth. There are no acres of second growth forest where timber harvest has occurred in the past.

(d) Fish Resources: There are two fish-bearing streams in the roadless area. Iyouktug Creek is the most important anadromous stream. It produces coho, pink, and chum salmon. Resident Dolly Varden, anadromous trout, and char have a minor occurrence.

(e) Wildlife Resources: Wildlife species present in this roadless area include brown bear and Sitka black-tailed deer. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island. Bald eagle nesting and roosting trees are located along the shoreline and into the major drainages. Peale's peregrine falcon passes through the forests during the spring and fall migration flights.

(5) Management Direction and Current Uses: This roadless area was allocated to two different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These two LUDs are Timber Production and Old-growth Habitat.

LUD	Acres
Timber Production	4,531
Old-growth Habitat	11,097

Approximately 29 percent of the roadless area was allocated to one LUD that allows development. This development LUD is the Timber Production LUD. Most of the roadless area, or 71 percent, was allocated to one non-development LUD, which is the Old-growth Habitat LUD.

The recreation activities include big game hunting, hiking, cross-country skiing, dispersed camping, saltwater-shore fishing, beachcombing, viewing wildlife/fish, and kayaking. There are no developed recreation facilities. Anchorages exist in Whitestone Harbor and False Bay. The area receives subsistence use, primarily by the residents of Hoonah. None of the VCUs in the roadless area are listed by Alaska Department of Fish and Game (ADF&G) as having the highest community fish and wildlife values. Three outfitter/guide permits were issued in 1999 for 11 service days. There is also a special use permit for lighthouse reserve within the roadless area.

(6) Appearance (Apparent Naturalness): This area is apparently unmodified by human activities and currently retains a natural appearance except near developed areas to the south and west of the roadless area.

(7) Surroundings (External Influences): The two large bodies of water, Icy Strait and Lynn Canal, are to the north of the Point Augusta Roadless Area. Their average width is 10 miles. The eastern boundary is Chatham Strait and approximately 5 miles across the water is Admiralty Island National Monument. The Hoonah road system and associated developments determine the southern and western boundaries. The northern and eastern portion of the Point Augusta Roadless Area is viewed from the Alaska Marine Highway ferry route on Chatham and Icy Straits. The flight path for regularly scheduled small plane service to Hoonah is over this area.

(8) Attractions and Features of Special Interest: The northwest corner of the Point Augusta Roadless Area is part of Whitestone Harbor, a protected harbor, used regularly for day and overnight use. There is a panoramic view of Icy Strait, Chatham Strait, and Lynn Canal from Whitestone Harbor. The area contains three inventoried recreation places, which cover 516 acres, or 3 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: There are only minor differences between the current boundaries and the 1989 boundaries. These resulted from more accurately mapping the boundary.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The Point Augusta Roadless Area has had little human modification to the land base and is natural appearance. Developed areas along Suntaheen and Iyouktug Creeks, which are along the west and south boundaries of the roadless area, affect the natural integrity and apparent naturalness. Development in these areas disrupts the natural appearance of the landscape from viewpoints along the Hoonah road system. The northern portion of the area exhibits a higher apparent naturalness. The area generally appears natural from Icy and Chatham Straits.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a moderate opportunity for solitude within the roadless area and a relatively high opportunity for primitive recreation. Air traffic and vehicle traffic pass nearby and may be heard and observed by people in this roadless area. Overall, recreation use levels are moderate, being higher along the fringes near road access and in Whitestone Harbor and False Bay. Generally, a person camping or traveling within the area, away from the roads and anchorages is unlikely to encounter others nearby; however, the possibility of meeting another group of people is high around the saltwater bays. Timber harvest or periodic activities in adjacent areas affect the opportunity for solitude when they are occurring. The steep landforms separate most of the roadless area from the sights and sounds of traffic on the Hoonah/False Bay road system, allowing a visitor to feel remote from human activity. The area is readily accessible from the community of Hoonah.

The steep nature of the landforms and the presence of brown bears present a moderate degree of challenge and the need for woods skills and experience.

The Point Augusta Roadless Area provides primarily an opportunity for semi-primitive non-motorized recreation. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	11,860	76%
Semi-Primitive Motorized (SPM)	2,108	13%
Roaded Modified (RM)	1,660	11%

The area contains three inventoried recreation places, which cover 516 acres, or 3 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	0	0
SPM	2	415
RM	3	101

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are no public recreation cabins or other developed recreation facilities in this roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

The inventoried roadless areas of the Tongass National Forest were rated according to this system in 1989 for the Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Chichagof Roadless Area was given a rating of 22 out of 28 possible points. The rating was re-evaluated for this updated version of the Analysis of the Management Situation. Based on this re-evaluation, the area was given a rating of 19. This rating is more reflective of the relatively small size of the area and the degree of influence the adjacent developments have on solitude, primitive recreation opportunities, and apparent naturalness. A separate rating was done for the larger area north and east of the developments adjacent to the area and received a rating of 20.

(4) Ecologic and Geologic Values: The roadless area is small and nearly divided in two by a road in the southeast. It is not connected to any other roadless areas or wilderness. It has no known unique ecologic or geologic values.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list any of the VCUs in this area as primary salmon or sportfish producers.

The ADF&G Anadromous Stream Catalogue (1998) lists two fish-bearing streams in this roadless area. Iyouktug Creek is the most important anadromous stream, producing coho, pink, and chum salmon. The headwater tributary channels for this large fish-producing stream are found in the roadless area. Resident Dolly Varden, anadromous trout, and char have a minor occurrence.

(b) Wildlife Resources: Wildlife species present in this roadless area include brown bear and Sitka black-tailed deer. Critical Sitka black-tailed deer winter habitat exists in this roadless area. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island. Bald eagle nesting and roosting trees are located along the shoreline and into the major drainages.

(c) Threatened, Endangered, and Sensitive Species: The area contains no known resident threatened, endangered, or sensitive species. Nine sensitive plant species are known or suspected to occur in the Craig Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are no known glaciers or unique geologic features.

(5) Scientific and Educational Values: There are opportunities to study forest, fish, wildlife, and geologic processes in an area easily accessed from Hoonah.

(6) Scenic Values: The visual character type of this roadless area is Admiralty-Chichagof. Mountains reach elevations of from 1,800 to 2,400 feet. Rocky shorelines are interspersed with small gravel beaches and the streams are quite large and long. There are some saltwater bays and estuaries in this area and they exhibit much variety. The lower slopes are densely forested and exhibit a combination of muskeg openings. Brush and scattered tree cover may be found up to approximately 2,400 feet in elevation. These attributes are unmodified by human activity and can be viewed from each of the National Forest Service's visual priority routes and use areas, except from Sonyakay Ridge. From this point, facing the roadless area, timber management activities can be seen.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: Icy Strait and Chatham Strait, a part of the Alaska Marine Highway system and a tour ship and small boat route; Sonyakay Ridge, a dispersed recreation area; False Bay, a saltwater use area; and Whitestone Harbor, a small boat route, dispersed recreation area, and boat anchorage.

Approximately 32 percent was inventoried as Variety Class B (possessing landscape diversity that is common for the character type) and approximately 67 percent was inventoried in Variety Class C (possessing a low degree of landscape diversity).
The majority (approximately 70 percent) of this roadless area is in Existing Visual Condition (EVC) I; these areas appear to be untouched by human activity. Approximately 30 percent, is in EVC V where changes in the landscape are obvious to the average person. These changes appear to be major disturbances.

(7) Social, Cultural, and Historical Values: At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout. The recreation activities include big game hunting, hiking, cross-country skiing, dispersed camping, saltwater-shore fishing, beachcombing, viewing wildlife/fish, and kayaking. There are no developed recreation facilities. Anchorages exist in Whitestone Harbor and False Bay. The area receives subsistence use, primarily by the residents of Hoonah. None of the VCUs in the roadless area are listed by ADF&G as having the highest, second, or third most important community fish and wildlife values. All the VCUs are listed among those VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998). Three outfitter/guide permits were issued in 1999 for 11 service days. A portion of the area is allocated to Timber Production LUD, jobs created by timber harvest is a component of the local economy.

(8) Manageability as Wilderness and Boundary Conditions/Changes: The Point Augusta Roadless Area has a definable northern and eastern boundary, Icy Strait and Chatham Strait. The south and west boundaries are not well defined by natural features. The roadless area could be better managed as a wilderness if the southern and western boundaries were moved away from the roads and harvested areas to the top of the nearest ridge system. This could increase solitude and improve the natural appearance and integrity of the area. As a consequence, the roadless area would become much smaller.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Cruise ships travel through Chatham and Icy Straits enroute to Glacier Bay. Many people fly into the area for sport fishing. There is the potential for some of these tourists to be drawn to fish, hunt, and camp in the roadless area. There is a potential for outfitter/guide permits to increase. There is also potential to build an alpine trail system and to develop a marine park in Whitestone Harbor. Public recreation cabins could be built in False Bay or Whitestone Harbor.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence use.

(3) Fish Resources: No fish habitat enhancement projects are currently planned in the roadless area.

(4) Wildlife Resources: No wildlife habitat enhancement projects are currently planned in the roadless area.

(5) Timber Resources: There are 9,246 acres mapped as productive old growth forest and no acres are mapped as second growth due to harvest in the roadless area. Of this, approximately 7,728 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,170 acres or 7 percent of this roadless area are estimated to be suitable for timber production. Approximately 249 of the suitable acres are mapped as high-volume old growth; of these acres, 45 are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless is dependent on the development of a road system in the adjoining roadless area to the south and west. There was a log transfer facility (LTF) in Whitestone Harbor. The existing nearby road systems, log transfer facility, and the logging camp at Hoonah make the management of timber harvest economical.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present; there are no know epidemic disease occurrences.

(7) Minerals: The 1984 U.S. Geological Survey did not identify the Point Augusta Roadless Area as having mineral development potential.

(8) Transportation and Utilities: There are no transportation or utility corridors present or planned in the roadless area.

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: There are no known areas of particular scientific interest.

(11) Land Use Authorizations: The current special use permit for the lighthouse will continue. An increase in the ongoing outfitter/guide permitting is probable.

(12) Land Status: The roadless area is entirely National Forest System land.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Hoonah residents have expressed divided opinions on the general area. Some favor expanded timber harvest while some want to protect the old-growth forest and subsistence resources. The local issues concerning this area include: continuing timber harvest and road building; the effects on fisheries and wildlife habitat caused by logging; maintaining the visual quality of high interest areas; maintaining lifestyles; the location of log transfer facilities; the distribution of harvest volume classes; and the tradeoffs between environmental protection measures and the economics of harvest activities.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Point Augusta Roadless Area. In 2001, HR 2908 proposed that the roadless area be managed in an unroaded condition.

(c) Public Input During Forest Plan Revisions and Appeals: The Alaska Forest Association and other industry commenters were opposed to any additional wilderness. Others recommended that remaining roadless areas should be managed for primitive recreation of old-growth habitat and protected from logging and road building. One commenter suggested extending the 85341 road along the ridge between VCU 210 and VCU 211. A letter from Angoon with 48 signatures recommended that areas along

the Chatham Strait be protected as subsistence areas. There should not be any logging, road building, or mining.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No comments on project level NEPA analysis are available for the roadless area.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended Roadless Areas 317, 318, 319, 321, 323, and 325 for LUD II protection. They indicated that it is more critical now than ever before that these remaining wild areas on Chichagof are protected. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 317 for permanent protection as LUD II.

The president of the Hoonah Indian Association asked for the protection, conservation, and responsible management of this roadless area because of its special interest to the Huna People.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

(2) Nearby Roadless and Wilderness Areas and Uses: The Chilkat-West Lynn Canal Roadless Area (#304) lies approximately 10 miles north across Icy Strait on the Chilkat Peninsula. Glacier Bay National Park and Preserve lies approximately 24 miles to the northwest, immediately west of Roadless Area 304. Admiralty Island National Monument and Kootznoowoo Wilderness is east of this area, approximately five miles across Chatham Strait. The Freshwater Bay Roadless Area (#325) is south of the Point Augusta Roadless Area. The two roadless areas are separated by the Hoonah/Suntaheen/False Bay road systems and associated developments. The Whitestone Roadless Area (#318) lies to the west and is separated from the other roadless area by the Hoonah/Whitestone Harbor road system and harvesting. Most of these areas receive low to moderate recreation and subsistence use. Cruise ships regularly visit Glacier Bay, in the Glacier Bay National Park and Preserve.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	25	45
Sitka (Pop. 8,835)	65	105
Hoonah (Pop. 860)	10	20
Angoon (Pop. 572)	35	35

Hoonah is the nearest community that has Alaska Marine Highway ferry service. People accessing this area will use the Hoonah road system or a privately-owned boat.

(4) Relative Contribution to the National Wilderness Preservation System: The Point Augusta Roadless Area is located on the northeastern coast of Chichagof Island. The northern and eastern borders follow Icy and Chatham Straits, while the western and southern borders follow roaded areas. The roadless area has rounded mountains and long flowing streams. There are 15 miles of shoreline on saltwater and 347 acres of alpine tundra. There are no large lakes or offshore islands in the roadless area. The elevation ranges from sea level to nearly 2,500 feet.

Overall, the Point Augusta Roadless Area is unmodified and has high natural integrity and apparent naturalness. Exceptions are the developed areas along Suntaheen and Iyouktug Creeks, which are along the west and south boundaries of the roadless area. Development in these areas disrupts the natural appearance of the landscape from viewpoints along the Hoonah road system. The northern portion of the area exhibits a higher apparent naturalness.

The area generally appears natural from Icy and Chatham Straits. There is a moderate opportunity for solitude and a relatively high opportunity for primitive recreation within the roadless area due to the small size of the roadless area and developments on adjacent land.

The roadless area has moderate scenic quality; none of the landscape of the area was inventoried as distinctive for the character type from a visual perspective. The northwest corner of the Point Augusta Roadless Area is part of Whitestone Harbor, a protected harbor that receives high use and has a panoramic view of Icy Strait, Chatham Strait, and Lynn Canal.

The roadless area includes about 2,824 acres of high-volume, old-growth forest. Of these acres, approximately 407 are mapped as high-volume, coarse-canopy old growth.

The roadless area is classified as being in the East Chichagof Island Biogeographic Province and makes up about one percent of the province. It is one of 12 inventoried roadless areas found in the province that collectively make up about 72 percent of the province. Approximately 79 percent of the province is unroaded. The province contains the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness, which make up 6 percent of the province. The province also includes all or portions of three LUD II areas, which make up approximately 25 percent of the province.

The Point Augusta Roadless Area lies completely within the Northeast Chichagof Fjordlands Ecological Section; it represents 3 percent of the entire ecological section, which is well represented in non-development LUDs (26 percent), including a small portion (7 percent) is within LUD II.

This roadless area is entirely within the Freshwater Bay Carbonates Ecological Subsection; this portion of the roadless area represents 6 percent of the entire ecological subsection which is well represented in other non-development LUDs (28 percent), but not represented in wilderness or LUD II.

The Point Augusta Roadless Area was rated at 19 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, it is ranked 70th from the highest (along with 13 other roadless areas) out of the 109 Tongass inventoried roadless areas. If the areas near Suntaheen and Iyouktug Creeks (which are along the west and south boundaries of the roadless area) are not included in the roadless area, the WARS score for the remainder is increased to 20.

There is national and some local support for managing the area in a roadless condition but there is little support for designating the area as a wilderness. The WARS score for the area is moderate to low relative to other areas of Southeast Alaska and the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness are in the biogeographic province. Designation of the area would add Congressional protection to about 15,630 acres, or about 6 percent, of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection. The roadless area is relatively small and fragmented and it is adjacent to roaded and harvested areas. These factors indicate that the relative contribution to the National Wilderness System would be low to moderate.

V. Environmental Consequences

The Point Augusta Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 71 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 29 percent of the roadless area. The land in the development LUDs provides an estimated 1,170 acres that are suitable for timber production (6 percent of the suitable acres on the Hoonah Ranger District). Approximately 45 of the suitable acres are classified as high-volume, coarse-canopy old growth. The values associated with the natural setting of the roadless area could be affected by activities allowed by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and development and recreation developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area would be provided long-term protection if designated LUD

II. Designation of the area would add Congressional protection to 6 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber sale projects would not be allowed and the potential for other development, including recreation, mineral, and hydroelectric, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to 6 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 317 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								15,629
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	11,097	11,097	11,097	11,097	11,097		11,097	
Semi-remote Recreation								
Recommended LUD II						15,629		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production	4,531	4,531	4,531	4,531	4,531		4,531	
TOTAL	**15,629**	**15,629**	**15,629**	**15,629**	**15,629**	**15,629**	**15,629**	**15,629**
Suitable Timber Lands	1,170	1,170	1,170	1,170	1,170	0	1,170	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Whitestone (318)

ACRES (NFS): 5,747

BIOGEOGRAPHIC PROVINCE: East Chichagof Island

ECOLOGICAL SECTION: Northeast Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 19

I. Overview and Description

(1) Location and Access: The Whitestone Roadless Area is on the north coast of Chichagof Island, directly south of Icy Strait. Whitestone Harbor lies in the southeast section; timber management development areas border the southern edge. The roadless area is approximately 5 air miles from Hoonah which has regular charter plane service and is on the Alaska Marine Highway route. The roadless area can be accessed via saltwater or from roads in the south. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: There are prehistoric petroglyphs and evidence of the Russian traders using the harbors around this roadless area during the 1800's. There is a popular anchorage in the northwest corner of Whitestone Harbor. There was beach logging inside the harbor at the mouth of the Suntaheen Creek and there is evidence of an old 'steam-donkey' still on the beach.

(3) Geography and Topography: The roadless area is a relatively flat expanse of land that is approximately 6 miles long and 2 miles wide. The highest point is less than 300 feet above sea level. There are approximately 13 miles of shoreline on saltwater. The roadless area does not include any acres mapped as ice, alpine, or rock features.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The roadless area is classified in the East Chichagof Island Biogeographic Province. This province has a dryer and colder climate than the outer coast of Chichagof Island and the winter snow pack is generally greater. Chichagof Island is deeply dissected into three peninsulas that may be functioning biologically more like separate islands. Vegetation in this province represents a modal similar to Admiralty Island Province.

Ecological Section/Subsection. The Whitestone Roadless Area is contained entirely within the Northeast Chichagof Fjordlands Ecological Section (M247C). This area is represented by one ecological subsection (see table below). The Freshwater Bay Carbonates Ecological Subsection has a bedrock mixture of carbonate and noncalcareous sedimentary rocks with bits of volcanic and intrusive igneous rocks. Many formations of almost pure carbonate form impressive mountains and ridges with extensive areas of exposed rocks containing pits and sinkholes. Atop the mountains, alpine vegetative communities thrive. The mid to lower elevations of the moderately sloped mountains have well drained soils that support productive hemlock spruce forests. In the valleys where glacial tills and glaciomarine sediments exist, non-forested wetlands are present. Where streams flow through calcareous colluvium, rich calcareous fens develop at the stream base creating a diverse and rare plant community (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Northeast Chichagof Fjordlands	Freshwater Bay Carbonates	100%

(b) Soils: The roadless area has poorly drained soils because of low relief and impermeable subsurface layers. In locations with poor drainage, deep organic soils (muskegs) tend to form. This situation occurs where the soil material fails to provide sufficient internal drainage or where topography prevents external drainage. These areas are generally not well suited for road construction since the soil materials tend to be wet and have associated low bearing strengths. In riparian areas, soil zones tend to contain sand and gravels as a result of flood deposition.

(c) Vegetation: Western hemlock-Sitka spruce forests dominate the overstory of the Southeast Alaska rain forest. The understory is composed of such shrubs as red huckleberry, rusty menziesia, and devil's club, and the forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants. Muskegs, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low elevation timber stands where drainage is restricted. Trees are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar. Approximately 1,587 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 4,149 acres mapped as forest land of which 2,841 acres or 68 percent are mapped as productive old-growth forest. Of the productive old growth, 51 acres or 2 percent are mapped as high-volume old-growth forest. The productive old growth includes about 127 acres of high-volume, coarse-canopy old growth. There are no acres of second growth.

(d) Fish Resource: Whitestone Head Creek is a major fish-bearing stream. The Anadromous Waters Catalogue (ADF&G, 2000) indicates that the stream produces coho, pink, and chum salmon and Dolly Varden char.

(e) Wildlife Resources: Wildlife species present in this roadless area include brown bear, Sitka black-tailed deer, and wolves. Small mammals include marten, mink, river otter, and red squirrel. Moose are reported to inhabit Chichagof Island but they have not been reported in this area. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island.

(5) Management Direction and Current Uses: This roadless area was allocated to four different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These four LUDs are Timber Production, Scenic Viewshed, Transportation and Utility System (TUS) and Old-growth Habitat. The TUS LUD is a secondary LUD that overlays the other land uses.

LUD	Acres
Timber Production	3,099
Transportation and Utility System	NA
Scenic Viewshed	1,475
Old-growth Habitat	1,173

Approximately 80 percent of the roadless area (not including the LUD overlay) was allocated to a LUD that allows development. Most of the roadless area, or 54 percent, was allocated to the Timber Production LUD. Near the southwest shore of Whitestone Harbor and along Icy Strait, approximately 26 percent of the roadless area was allocated to the Scenic Viewshed LUD. The Transportation and Utility System LUD overlay includes the potential Power Transmission Corridor on the north boundary of the roadless area.

The remaining approximate 20 percent of the roadless area was allocated to one non-development LUD. The Old-growth Habitat LUD is located on the north shore of Whitestone Harbor area.

An anchorage is located in the northwest corner of Whitestone Harbor. Recreation activities identified are hunting, hiking, cross-country skiing, dispersed camping, saltwater shore fishing, beach combing, viewing wildlife/fish, and kayaking. There are no public recreation cabins or other developed recreation facilities in the Whitestone Roadless Area. One outfitter/guide permit was issued in 1999 for one service day. Except for this permit, there are no other special use permits in this area.

(6) Appearance (Apparent Naturalness): The roadless area appears unmodified and in a natural condition. The key viewpoints and travel routes are Icy Strait and the Hoonah road system.

(7) Surroundings (External Influences): To the north of the Whitestone Roadless Area are Icy Strait and the Alaska Marine Highway route. This passage is also heavily used by private boat owners. Whitestone Harbor, to the east of this roadless area, has an identified recreation anchorage in its northwest corner. A log transfer facility (LTF) was located on the southern shore of Whitestone Harbor and a road runs along the south shore. The road travels west adjacent to the Whitestone Roadless Area for approximately 3 miles and branches to the north and south into developed areas. The northernmost developed area continues for 5 miles along the southern boundary of the Whitestone Roadless Area. At that point, the land ownership changes from federal to Huna Totem Corporation lands. The National Forest System lands were developed in the early 1980's. The private lands extend west for approximately another 5 miles to Hoonah and have also been extensively developed. A small western portion of the Whitestone Roadless Area borders on private lands. This roadless area is easily accessible from these road systems with minimal walking involved.

(8) Attractions and Features of Special Interest: Whitestone Harbor is considered a desirable harbor; it receives constant use from the Hoonah population and transient mariners. There is a panoramic view of Icy Strait, Lynn Canal, and Chatham Strait from Whitestone Harbor. The area contains two inventoried recreation places, which cover 621 acres, or 11 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: There are only minor differences between the 1989 and 2003 boundaries. These are the result of more accurately mapping the boundaries.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The Whitestone Roadless Area has been unmodified by human development. The area has a natural appearance from the Icy Strait and Whitestone Harbor. The natural integrity is high even though affected by timber harvest along the southern boundary.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There are moderate opportunities for solitude and relatively high opportunities for primitive recreation in the area near the northern shoreline and in the interior of this roadless area but the area is heavily used by the residents of Hoonah and the possibility of encountering people is high, especially along the shoreline. Opportunities for solitude are affected by traffic on roads along the southern boundaries, especially during periods of active management, and by boat and floatplane along the shore.

The roadless area is small and nearly flat. With the exception of a possible encounter with a brown bear, the area offers little opportunity for adventure or challenging experiences. Dispersed recreation activities include hunting, hiking, cross-country skiing, dispersed camping, saltwater shore fishing, beach combing, viewing wildlife/fish, and kayaking. There is an anchorage in the northwest corner of Whitestone Harbor.

The area provides primarily semi-primitive non-motorized and semi-primitive motorized opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	3,018	53%
Semi-Primitive Motorized (SPM)	2,346	41%
Roaded Modified (RM)	382	7%

The area contains two inventoried recreation places, which cover 621 acres, or 11 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	0	0
SPM	1	569
RM	2	52

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are no public recreation cabins or other developed recreation facilities in the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

The inventoried roadless areas of the Tongass National Forest were rated according to this system in 1989 for the Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Whitestone Roadless Area was given a rating of 21 out of 28 possible points. The rating was re-evaluated for this updated version of the Analysis of the Management Situation. Based on this re-evaluation, the area was given a rating of 19. This rating reflects the degree of development and activities that occur on wilderness attributes on this relatively small area.

(4) Ecologic and Geologic Values: The roadless area is small; it borders a developed area in the south and private land in the west. It is not connected to any other roadless areas or wilderness. It has no known unique ecologic or geologic values.

(a) Fish Resources: The Alaska Department of Fish and Game (ADF&G) rated fish resources as part of its Forest Habitat Integrity Program (1983). These ratings describe the value of VCUs for sport fish, commercial fish, and estuaries. Neither VCU in this roadless area was rated as having the highest value for sport or commercial fish or for estuarine values. A portion of VCU 207 lies within this roadless area, and was listed as a primary sport fish producer by the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998).

The ADF&G Anadromous Stream Catalogue (1998) lists two fish-bearing streams in this roadless area. Whitestone Head Creek is a major fish-bearing stream, providing habitat for pink, coho, and chum salmon and Dolly Varden char.

(b) Wildlife Resources: Wildlife species present in this roadless area include brown bear and Sitka black-tailed deer. Small mammals include marten, mink, river otter, and red squirrel. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island. The Whitestone Roadless Area shoreline is considered critical deer habitat. The Peale's peregrine falcon passes through the area during the spring and fall migration flights.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks, are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Hoonah Ranger District.

(d) Karst, Cave, and Other Geologic Resources: A portion of this area is underlain by limestone or marble and karst and cave resources are known to have developed there. Only limited inventory has occurred in this area so the extent of karst and cave development is not fully understood. The karst resources in this area are not mapped. The limestones and marbles found here are commonly the ridge forming rock types. Extensive karst systems are known from the intensity and numbers of features found described from the limited inventory and air photo interpretations. Paleontological discoveries are likely as well as archaeological finds. Because of the thickness of the limestone and marble in this area, vertical pits and cave systems of record depth are possible. Extensive areas of limestone and marble are exposed from sea level to the ridge tops in these glaciated valleys. The karst systems found here extend from the alpine or higher elevations to the sea providing increased productivity for the plant, animal, and aquatic communities found on the karst lands.

(5) Scientific and Educational Values: The area has opportunities to study forests, fish, wildlife, and geologic processes in an area accessible from Hoonah by road. There are several memorial sites in this area for people who have drowned along this coastline.

(6) Scenic Values: The visual character type of this area is Admiralty-Chichagof. This character type, particularly in this area, is characterized by somewhat insignificant geologic features; features (if present) are usually subordinate to other objects of the visual field. This roadless area is characterized by featureless shorelines, streams and minor lakes, ponds, and bogs. From the main travel routes, Icy Strait and Whitestone Harbor, the area appears unmodified.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: Icy Strait, a part of the Alaska Marine Highway system and a tour ship and small boat route; and Whitestone Harbor, a small boat route, dispersed recreation area, and boat anchorage.

Approximately 80 percent of acreage in the area was inventoried in Variety Class C (possessing a low degree of landscape diversity). About 19 percent is in Variety Class A (possessing landscape diversity that is unique for the character type).

The majority of this roadless area (approximately 68 percent) is in Existing Visual Condition (EVC) I; these areas appear to be untouched by human activity. Approximately 31 percent of the area is in EVC V. In these areas, changes in the landscape are obvious to the average person and appear to be major disturbances.

(7) Social, Cultural, and Historical Values: There are prehistoric petroglyphs and evidence of the Russian traders using the harbors around this roadless area during the 1800's. There is a popular anchorage in the northwest corner of Whitestone Harbor. There was beach logging inside the harbor at the mouth of the Suntaheen Creek and there is evidence of an old ‘steam-donkey’ still on the beach. Recreation activities identified are hunting, hiking, cross-country skiing, dispersed camping, saltwater shore fishing, beach combing, viewing wildlife/fish, and kayaking. There are no public recreation cabins or other developed recreation facilities in the Whitestone Roadless Area. One outfitter/guide permit was issued in 1999 for one service day. Except for this permit, there are no other special use permits in this area. The area receives subsistence use, primarily by the residents of Hoonah. None of the VCUs in the roadless area are listed by ADF&G as having the highest community fish and wildlife values.

(8) Manageability as Wilderness and Boundary Conditions/Changes: The entire roadless area (approximately 2 miles wide and 6 miles long) is low-lying and exhibits little terrain relief. Icy Strait borders the roadless area to the north and east. The Hoonah road system, the road to the LTF at Whitestone Harbor, and the private lands of Huna Totem Corporation bound the south and east portion of the Whitestone Roadless Area. Because of the relative smallness of this roadless area and the immediate external influences, management in a wilderness condition would be difficult to accomplish. There are no boundary changes that would create borders that are more definitive.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Cruise ships travel through Chatham and Icy Straits enroute to Glacier Bay. Many people fly into the area to for sport fishing. There is the potential for some of these tourists to be drawn to fish, hunt, and camp in the roadless area. There is a potential for outfitter/guide permits to increase. Public recreation cabins could be built in Whitestone Harbor. Because of the area's easy accessibility to Hoonah residents, there is increased recreational hunting and gathering potential.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence use.

(3) Fish Resource: There are no fish enhancement projects currently planned within this roadless area.

(4) Wildlife Resources: There are no wildlife enhancement projects currently planned within this roadless area.

(5) Timber Resources: There are 2,841 acres inventoried as productive old-growth forest in the roadless area. None of the area is mapped as second growth. Of this, approximately 2,224 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 439 acres or 8 percent of this roadless area are estimated to be suitable for timber production. None of the suitable acres are mapped as high-volume old growth or as high-volume, coarse-canopy old growth. The potential for managing timber in this roadless area is dependent on the development of a road system in the adjoining roadless area to the south and west. There is a LTF in Whitestone Harbor. The existing nearby road systems and logging camp at Hoonah make timber harvest economical.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present; there are no know epidemic disease occurrences.

(7) Minerals: The 1984 U.S. Geological Survey did not identify the Whitestone Roadless Area as having potential for mineral development.

(8) Transportation and Utilities: The roadless area contains a potential Power Transmission Corridor near the north boundary. There are no transportation corridors proposals at this time within the area.

(9) Water Availability and Use: There are no recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: There are no known areas of particular scientific interest.

(11) Land Use Authorizations: Increased use by outfitter/guides is likely to result in an increased need for authorizations.

(12) Land Status: The roadless area is entirely National Forest System land, however; the western half of this roadless area is encumbered. The encumbered area borders land owned by the Huna Totem Village Corporation.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The local issues include: continuing harvesting and roading of the timber lands; the effects on fisheries and wildlife habitat caused by logging; maintaining the visual quality of high interest areas; maintaining existing lifestyles; location of LTFs; the distribution of harvest volume classes; and the tradeoffs between environmental protection measures and the economics of the harvest activities. The people of Hoonah use this area for subsistence, gathering roots and berries, and hunting. The Natives feel these natural products are becoming scarce in their local area.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Point Augusta Roadless Area. In 2001, HR 2908 proposed that the roadless area be designated as LUD II and managed in an unroaded condition.

(c) Public Input During Forest Plan Revisions and Appeals: The Alaska Forest Association and other industry commenters were opposed to any additional wilderness. Others recommended that remaining roadless areas should be managed for primitive recreation of old-growth habitat and protected from logging and road building. One commenter suggested extending the 85341 road along the ridge between VCU 210 and VCU 211. A letter from Angoon with 48 signatures recommended that areas near the Chatham Strait be protected as subsistence areas. There should not be any logging, road building, or mining.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No comments on project level NEPA analysis are available for the roadless area.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended Roadless Areas 317, 318, 319, 321, 323, and 325 for LUD II protection. They indicated it is more critical now than ever before that these remaining wild areas on Chichagof are protected. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 318 for permanent protection as LUD II.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

(2) Nearby Roadless and Wilderness Areas and Uses: There are no other roadless areas contiguous with Whitestone Roadless Area. Both Chilkat-West Lynn Canal (304) and Mansfield Peninsula (306) Roadless Areas are across major bodies of water. The Point Augusta (317) and the Freshwater (325) Roadless Areas are separated from the Whitestone Roadless Area by the Hoonah road system and the associated timber harvest. The closest wilderness is the Kootznoowoo Wilderness on Admiralty Island, on the east side of the Chatham Strait. The West Chichagof-Yakobi Wilderness lies on the other side of Chichagof Island, approximately 28 miles to the west. These areas receive low to moderate recreation and subsistence use. Cruise Ships regularly visit Glacier Bay, in the Glacier Bay National Park and Preserve.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	30	45
Sitka (Pop. 8,835)	70	120
Hoonah (Pop. 860)	5	15
Angoon (Pop. 572)	45	50

The closest Alaska Marine Highway service to the Whitestone Roadless area is Hoonah.

(4) Relative Contribution to the National Wilderness Preservation System: The Whitestone Roadless Area is located on the northeastern coast of Chichagof Island. The northern border follows Icy Strait, the eastern border follows Whitestone Harbor, and the southwestern and southeastern borders follow roaded areas. The roadless area is a relatively flat expanse of land that is approximately 6 miles long and 2 miles wide. The highest point is less than 300 feet above sea level. There are no large lakes or offshore islands in the roadless area.

Most of the roadless area is unmodified and has high natural integrity and apparent naturalness, except near roaded and harvested areas along the southern boundary. These developments affect the natural integrity of the portions of the roadless area. When viewing the area from Icy Strait, a natural appearance dominates the landscape. There are moderate opportunities for solitude and relatively high opportunities for primitive recreation in the area near the northern shoreline and in the interior of this roadless area. The area is heavily used by the residents of Hoonah and the possibility of encountering people is high, especially along the shoreline.

Approximately 19 percent of the roadless area is rated as distinctive for the character type from a visual perspective. The roadless area includes part of Whitestone Harbor, a protected harbor that receives high use and has a panoramic view of Icy Strait, Chatham Strait, and Lynn Canal.

The roadless area includes about 127 acres mapped as high-volume, coarse-canopy old growth.

The roadless area is classified as being in the East Chichagof Island Biogeographic Province and makes up less than 1 percent of the province. It is one of 12 inventoried roadless areas found in the province that collectively make up about 72 percent of the province. Approximately 79 percent of the province is unroaded. The province contains the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness, which make up 6 percent of the province. The province also includes all or portions of three LUD II areas, which make up approximately 25 percent of the province.

The Whitestone Roadless Area lies completely within the Northeast Chichagof Fjordlands Ecological Section. This portion represents 1 percent of the entire ecological section, which is well represented in other non-development LUDs (26 percent) and a small portion (7 percent) is within LUD II.

This roadless area is entirely within the Freshwater Bay Carbonates Ecological Subsection; this portion of the roadless area represents 2 percent of the entire ecological subsection which is well represented in non-development LUDs (28 percent); however, it is not represented in existing wilderness or LUD II.

The Whitestone Roadless Area was rated at 19 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, it is ranked 70th from the highest (along with 13 other roadless areas) out of the 109 Tongass inventoried roadless areas.

There is national and some local support for managing the area in a roadless condition but there is little support for designating the area as a wilderness. The WARS score for the area is moderate to low relative to other areas of Southeast Alaska, and the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness are in the biogeographic province. Designation of the area would add Congressional protection to about 2 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection. The roadless area is relatively small and it is adjacent to roaded and harvested areas. These factors indicate that the relative contribution to the National Wilderness System would be low to moderate.

V. Environmental Consequences

The Whitestone Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 20 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 80 percent of the roadless area. The land in the development LUDs provides an estimated 439 acres that are suitable for timber production (2 percent of the suitable acres on the Hoonah Ranger District). None of the suitable acres are mapped as high-volume, coarse-canopy old growth. The values associated with the natural settings of the roadless area could be affected by developments allowed by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and development and recreation developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to 2 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber sale projects would not be allowed, and the potential for other development, including recreation, mineral, and hydroelectric, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to 2 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 318 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								5,747
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	1,173	1,173	1,173	1,173	1,173		1,173	
Semi-remote Recreation								
Recommended LUD II						5,747		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	1,475	1,475	1,475	1,475	1,475		1,475	
Modified Landscape								
Timber production	3,099	3,099	3,099	3,099	3,099		3,099	
TOTAL	**5,747**	**5,747**	**5,747**	**5,747**	**5,747**	**5,747**	**5,747**	**5,747**
Suitable Timber Lands	439	439	439	439	439	**0**	439	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Pavlof-East Point (319)

ACRES (NFS): 4,731

BIOGEOGRAPHIC PROVINCE: East Chichagof Island

ECOLOGICAL SECTION: Northeast Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 16

I. Overview and Description

(1) Location and Access: The Pavlof-East Point Roadless Area is on the northeast coast of Chichagof Island, bounded on the northeast by Freshwater Bay. Chatham Strait lies to the east. Timber harvest units and roads form the inland boundary of this roadless area. The roadless area is approximately 20 air miles south of Hoonah and 5 miles northeast of Tenakee Springs. Tenakee Springs has Alaska Marine Highway service and regular small plane service. Access to the roadless area is from the Kennel Creek/Hoonah road system and by boats. Access to the interior is by foot and helicopter. There are no places suitable for landing wheeled aircraft.

(2) History: At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout the area. Pavlof Harbor was used as a fish station by the early Alaska Native cultures. The Hudson Bay Trading Company conducted illegal trading with the Tlingit in Pavlof Bay from 1859 to 1865. The Astoria and Alaska Packing Company had a fish packing plant here until 1889 and a saltery was established by 1900. Recent historical activities in this area have included commercial fishing and logging. A fishpass was constructed on Pavlof River by the Civilian Conservation Corps in the 1930's. Construction of two fish ladders on Pavlof River and Pavlof Falls was completed in 1987. Forest archaeologists have located village sites, garden spots, an old smokehouse, and a pictograph within the area.

(3) Geography and Topography: The roadless area ranges from sea level to over 1,300 feet in elevation. The Pavlof drainage includes a river, lake, waterfalls, and a bay. There are 15 miles of saltwater shoreline and four islands totaling 162 acres in this roadless area. There are no ice or snow, alpine or rock features mapped in the area.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The roadless area is classified as the East Chichagof Island Biogeographic Province. This province has a dryer and colder climate than the outer coast of Chichagof Island and the winter snow pack is generally greater. Chichagof Island is deeply dissected into three peninsulas that may be functioning biologically more like separate islands. Vegetation in this province represents a modal similar to Admiralty Island Province.

Ecological Section/Subsection. The Pavlov-East Point Roadless Area is contained entirely within the Northeast Chichagof Fjordlands Ecological Section (M247C). This area is represented by one ecological subsection (see table below). The Freshwater Bay Carbonates Ecological Subsection has a bedrock mixture of carbonate and noncalcareous sedimentary rocks with bits of volcanic and intrusive igneous rocks. Many formations of almost pure carbonate form impressive mountains and ridges with extensive areas of exposed rocks containing pits and sinkholes. Atop the mountains, alpine vegetative communities thrive. The mid to lower elevations of the moderately sloped mountains have well drained soils that support productive hemlock spruce forests. In the valleys where glacial tills and glaciomarine sediments exist, non-forested wetlands are present. Where streams flow through calcareous colluvium, rich calcareous fens develop at the stream base creating a diverse and rare plant community (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Northeast Chichagof Fjordlands	Freshwater Bay Carbonates	100%

(b) Soils: There are unstable soils in the Pavlof/East Point Roadless Area on the north side of Pavlof Ridge and along the area called East Point. Because of the high rainfall, the available nutrients can be leached rapidly and exposed mineral soils are subject to erosion. Due to rapid loss of material by erosion and efficient rainwater runoff, the shallow soils with good drainage develop on steeper slopes.

The Pavlof drainage has poorly-drained, deep organic soils (muskegs). Drainage improves with increased slope; however, as slopes become oversteepened, soil depths become shallower. The riparian areas in this area tend to contain sand and gravels resulting from soil deposit during floods.

(c) Vegetation: In this roadless area, Western hemlock-Sitka spruce forests dominate. The understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Approximately 139 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. They are dominated by sphagnum mosses, sedges, and shrubs of the heath family, and are interspersed among low elevation timber stands where drainage is restricted. Trees are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar.

There are approximately 4,500 acres mapped as forest land of which 3,628 acres or 81 percent are mapped as productive old-growth forest. Of the productive old growth, 1,518 acres or 42 percent are mapped as high-volume old-growth forest. The productive old growth includes about 276 acres of high-volume, coarse-canopy old growth. There are no acres of second-growth forest where timber harvest has occurred in the past.

(d) Fish Resources: Pavlof River and Lake have a significant salmon run. The Anadromous Waters Catalogue (ADF&G, 2000) indicates that Pavlof River and Lake provide spawning and rearing habitat for sockeye, coho, pink, and chum salmon, cutthroat trout, and Dolly Varden char. Fish ladders have been constructed on Pavlof River and Pavlof Falls, both completed in 1987. A second fish-bearing stream in this area, Wachusett Creek, provides habitat for coho, pink, and chum salmon.

(e) Wildlife Resources: Wildlife species present in this roadless area include Sitka black-tailed deer and brown bears. Small mammals include marten, mink, river otter, and red squirrel. Bald eagle roosting and nesting habitat exists along the shoreline of the roadless area. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island.

(5) Management Direction and Current Uses: The roadless area was allocated to five different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These five LUDs are Timber Production, Scenic Viewshed, Modified Landscape, Old-growth Habitat, and Semi-Remote Recreation.

LUD	Acres
Timber Production	782
Scenic Viewshed	664
Modified Landscape	492
Old-growth Habitat	2,684
Semi-Remote Recreation	109

Approximately 41 percent of the roadless area was allocated to development LUDs that permit timber harvest and associated road construction (Timber Production, Scenic Viewshed, Modified Landscape). The Timber Production

LUD was assigned to approximately 17 percent of the roadless area. About 664 acres along a ridgeline facing Freshwater Bay were allocated to Scenic Viewshed LUD, which totals approximately 14 percent of the roadless area. Approximately 10 percent of the roadless area was allocated to Modified Landscape LUD, primarily located near the Pavlof River.

Approximately 59 percent of this roadless area was allocated to a non-development LUD (Old-growth Habitat, Semi-Remote Recreation). The Old-growth Habitat LUD was assigned to approximately 57 percent of the roadless area. Approximately 109 acres, or 2 percent of the roadless area, was allocated to the Semi-Remote Recreation LUD.

Eight recreation places have been identified in the Pavlof/East Point Roadless Area. People anchor their boats and use the area around Pavlof Harbor and Pavlof Lake for dispersed camping. Trails run from Pavlof Harbor to the north and south shore of Pavlof Lake. Activities occurring in the Pavlof/East Point Roadless Area are marine viewing, stream and lake fishing, kayaking, hiking, and hunting. No outfitter/guides permits were issued in 1999 for the roadless area.

The area around Pavlof Lake and Pavlof Harbor has been conveyed to the State. Special use permits have been issued for cabins north of Pavlof Harbor and at Wachusett Cove. The Forest Service manages two fish passes on the Pavlof River, one of which is in the roadless area. As a wildlife improvement project, nesting boxes for general waterfowl with emphasis on ducks and geese, have been placed along Pavlof Lake. The area receives subsistence use, mainly from residents of Tenakee Springs, Hoonah, and Freshwater Bay.

(6) Appearance (Apparent Naturalness): The area has been modified by public recreation cabins, trails around the Pavlof Lake area, and timber harvest and roads along the entire landward boundary.

(7) Surroundings (External Influences): This roadless area neighbors National Forest System land to the west and the State owned land around Pavlof Lake. Freshwater Bay is adjacent to the entire east boundary. The Kennel Creek road system, built in the early 1960's, borders the northwest corner of the roadless area. This system continues past the closed Kennel Creek logging camp, built at the same time as the road system, and turns into the Hoonah road system. A Forest Service work center, located at Kennel Creek, is used year round but most heavily during the summer months. The Kennel Creek system runs southeast into the Pavlof River drainage. In the early 1980's the East Point and Pavlof River roads were connected. This road comes within one-half mile of the beach near East Point. The Pavlof-East Point area can be accessed from either of these road systems. The town of Tenakee Springs is 7 miles to the southwest. Tenakee Springs receives regular Alaska Marine Highway service.

(8) Attractions and Features of Special Interest: Pavlof Harbor is unique because it offers protection from the weather on four sides. It is noted on the nautical charts as a safe harbor and, as such, is used consistently by transit vessels. An easy trail, which parallels the waterfalls between the lake and the bay, accesses the north and south shores of Pavlof Lake. The area contains eight inventoried recreation places, which cover 1,683 acres, or 36 percent of the roadless area.

In the Pavlof drainage, there are significant runs of salmon from the harbor into the lake and river. Two fish ladders have been constructed in this drainage to enhance these fisheries.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: Road construction has resulted in the area south of East Point being dropped from the roadless area. Also, the area around Pavlof Lake and Pavlof Harbor has been conveyed to the State. This area is no longer part of the roadless area. Several small areas along the boundary have been excluded between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The natural integrity of the roadless area and its apparent naturalness have been modified by public recreation cabins, trails around the Pavlof Lake area, timber harvest and roads along the entire landward boundary, the two fish passes constructed in the Pavlof drainage, and the old

mechanical equipment around Pavlof Lake left from the saltery and fish packing plant in the early 1900's. The adjacent area to the southwest is modified by roads and timber harvest activities, which affect the landscape's apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: This area provides a low opportunity for solitude and a moderate opportunity for primitive recreation. The activities associated with the Forest Service work center, the Kennel Creek road system, the closed logging camp area, and the year-round population of Tenakee Springs all affect the solitude of this area. The Alaska Marine Highway route passes near the area, and floatplanes and powerboats land along its shoreline.

The roadless area presents little opportunity for adventure and challenging experiences beyond the possibility of an encounter with a brown bear.

The Pavlof-East Point Roadless Area provides primarily semi-primitive motorized recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Motorized (SPM)	3,903	83%
Roaded Natural (RN)	19	0%
Roaded Modified (RM)	773	16%

The area contains eight inventoried recreation places, which cover 1,683 acres, or 36 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPM	7	1,521
RN	1	19
RM	1	144

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

The roadless area includes two public recreation cabins and trails around the Pavlof Lake area on State land.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Pavlof – East Point Roadless Area was 22 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 16. This rating reflects the degree of developments and activities effect on the wilderness attributes of this relatively small area.

(4) Ecologic and Geologic Values: The roadless area is small and narrow, bounded on the landward side by a road and timber harvest areas. It is not connected to any other roadless areas or wilderness. The small cove into which the Pavlof River empties is somewhat unique because of its shape and because of the protection the harbor provides.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed both VCUs in this roadless area (217 and 218) as primary sportfish producers and listed neither as primary salmon producers (ADF&G, 1998).

Many of these streams provide habitat for anadromous trout and char, but the level of production is largely unknown. Pavlof River and Lake have a significant salmon run; the watershed has been identified as one of 19 "high value" watersheds by ADF&G (USDA Forest Service, 1997). Pavlof River and Lake provide habitat for sockeye, coho, pink, and chum salmon, cutthroat trout, and Dolly Varden char. Average annual peak escapement is 719 pink salmon for Pavlof River. This river also has very good coho salmon smolt production capability (ADF&G, 1998). Construction of two fish ladders on Pavlof River and Pavlof Falls was completed in 1987. Wachusett Creek provides habitat for coho, pink, and chum salmon.

(b) Wildlife Resources: Wildlife species present in this roadless area include Sitka black-tailed deer and brown bear. Small mammals include marten, mink, river otter and red squirrel. Deer winter range is found from lower Pavlof Ridge to Cedar Cove, around Pavlof Lake and the lower part of the Pavlof River. Outer Point and all of Wachusett Cove are also considered deer winter range. Deer winter range can also be found northwest of East Point and continuing southwest to Coffee Cove. Bald eagle roosting and nesting habitat exists along the shoreline of the roadless area. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island. Peale's peregrine falcon passes through the forests during the spring and fall migration flights.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Hoonah Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are extensive karst resources in this roadless area, encompassing 2,413 acres, or 51 percent of the area. About a third of these karst resources are classified as high vulnerability karst. A portion of this area is underlain by limestone or marble, and karst and cave resources are known to have developed there. Only limited inventory has occurred in this area so the extent of karst and cave development is not fully understood. The limestones and marbles found here are commonly the ridge-forming rock types. Extensive karst systems are known from the intensity and numbers of features identified during the limited inventory and air photo interpretations. Paleontological discoveries are likely as well as archaeological finds. Because of the thickness of the limestone and marble in this area, vertical pits and cave systems of record depth are possible. Extensive areas of limestone and marble are exposed from sea level to the ridge tops in these glaciated valleys. The karst systems found here extend from the alpine or higher elevations to the sea providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. There are no glaciers in this area.

(5) Scientific and Educational Values: Pavlof Harbor is of ecological interest because of the significant salmon runs each year, geologic interest because of the shape and because of the protection the harbor provides, and cultural importance because of the continuous historical use the area has received.

(6) Scenic Values: This roadless area is classified as being in the Admiralty-Chichagof character type. Rocky shorelines are interspersed with small gravel beaches. Streams are generally larger and longer on the eastern side of Chichagof Island. There are some saltwater bays and they exhibit much variety and size. The lower slopes are densely forested, but sometimes exhibit a combination of muskeg openings, brush, and scattered tree cover up to approximately 2,500 feet. Upper slopes and summits appear barren from a distance, but offer a variety of alpine vegetation as well as numerous rock outcroppings. This area appears to have a natural setting from all of the major

viewing areas. Timber harvest activities in the adjacent area can be seen from the roads that link Hoonah to East Point and when facing southwest on the ridge north of Pavlof River.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Freshwater Bay, a small boat route and saltwater use area; Cedar Cove and Pavlof Harbor, which are boat anchorages; Chatham Strait, a part of the Alaska Marine Highway system and a small boat route; the Public Use Roads #8502, #8508, #8510, and #8513; Pavlof River, Pavlof Lake, Redcliff and Cedar Islands, dispersed recreation areas; Pavlof Land Trail # 531; and Pavlof River Canoe Route.

Approximately 19 percent of this roadless area was inventoried Variety Class A (possessing landscape diversity that is unique for the character type). Fifteen percent of the area was inventoried Variety Class B (possessing landscape diversity that is common for the character type). Approximately 63 percent was inventoried in Variety Class C (possessing a low degree of landscape diversity). For about 2 percent of the area, the Variety Class was not inventoried.

The majority (approximately 78 percent) of this roadless area is in Existing Visual Condition (EVC) I; these areas appear to be untouched by human activity. Two percent of the acreage is in EVC II, where changes are not noticed by the average person unless pointed out. Approximately 18 percent is EVC V, where changes in the landscape are obvious to the average person and appear to be major disturbances. For about 2 percent of the area, the EVC was not inventoried.

(7) Social, Cultural, and Historical Values: At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout the area. Pavlof Harbor was used as a fish station by the early Alaska Native cultures. The Hudson Bay Trading Company conducted illegal trading with the Tlingit in Pavlof Bay from 1859 to 1865. The Astoria and Alaska Packing Company had a fish packing plant here until 1889 and a saltery was established by 1900. Recent historical activities in this area have included commercial fishing and logging. Forest archaeologists have located village sites, garden spots, an old smokehouse, and a pictograph within the area.

Eight recreation places have been identified in the Pavlof/East Point Roadless Area. People anchor their boats and use the area around Pavlof Harbor and Pavlof Lake for dispersed camping. Trails run from Pavlof Harbor to the north and south shore of Pavlof Lake. People use the roadless area for marine viewing, fishing, kayaking, hiking, and hunting. No outfitter/guide permits were issued in 1999 for the roadless area; however, 10 were issued for the Freshwater Bay (147 service days). Special use permits have been issued for cabins north of Pavlof Harbor and at Wachusett Cove. The area receives subsistence use, mainly from residents of Tenakee Springs, Hoonah, and the Kennel Creek logging camp. Both VCUs are listed among the VCUs with the highest community fish and wildlife values and the highest sport fishing values. Both VCUs are also listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: Except for the shore, boundaries are not well defined, especially the boundary with State land near the center of the roadless area. Small hills in this area separate the lake and bays from the harvested and roaded areas to the north, west and south. The average distance from the harvest areas is less than a mile.

Due to the size and shape, the State enclave, and the large roaded areas adjacent to the roadless area, this area could not be easily managed as a wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Cruise ships travel through Chatham Strait enroute to Glacier Bay. Many people fly into the area for sport fishing. There is the potential for some of these tourists to be drawn to fish, hunt, and camp in the roadless area. There is a potential for outfitter/guide permits, trail construction, and public recreation cabins. In 1996, the Alaskan Visitors Association (AVA) proposed the following recreation developments for

Pavlof Harbor: a day-use recreation facility for 100 persons, a leased proprietary camp for 15 persons, boardwalks, paths, and trails.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resources: There are no fish habitat enhancement projects currently planned for the roadless area.

(4) Wildlife Resources: There are no wildlife habitat enhancement projects currently planned for the roadless area.

(5) Timber Resources: There are 3,628 acres inventoried as productive old-growth forest in the roadless area. None of the area is mapped as second growth. Of the productive old growth, approximately 2,363 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 255 acres or 5 percent of this roadless area are estimated to be suitable for timber production. Approximately 33 of the suitable acres are mapped as high-volume old growth; of these acres, 14 are mapped as high-volume, coarse-canopy old growth. The potential for managing timber in the roadless area is high because the nearby road systems and logging camp increase the likelihood of being able to manage timber economically.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present; there are no know epidemic disease occurrences.

(7) Minerals: In 1984, this area was identified as having mineral development potential for magmatic oxide or sulfide, copper, and molybdenum porphyry. The Tongass Land Management Plan Revision EIS (USDA Forest Service, 1997) indicates this area is not within an area of high mineral development potential and no mining claims exist.

(8) Transportation and Utilities: There are no existing or planned transportation or utility corridors within the roadless area.

(9) Water Availability and Use: Cabins north of Pavlof Harbor and at Wachusett Cove create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: There are opportunities to study the extensive karst system, as well as fish, wildlife, and forests. The mapped karst resources encompass approximately 2,413 acres or 51 percent of the roadless area.

(11) Land Use Authorizations: The current recreation residence special use permits will continue. There is potential for increased outfitter and guide permits.

(12) Land Status: The roadless area is entirely National Forest System land. Land adjacent to the roadless area near Pavlof Lake and Pavlof Harbor has been conveyed to the State.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The local issues include: continued harvesting and roading of the timber lands, the effects on fisheries and wildlife habitat caused by logging, maintaining the visual quality of high interest areas, maintaining lifestyles, location of log transfer facilities, the distribution of harvest volume classes, and the tradeoffs between environmental protection measures and the economies of the harvest activities.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Freshwater

Bay Roadless Area. In 2001, HR 2908 proposed that the roadless area be managed in an unroaded condition.

(c) Public Input During Forest Plan Revisions and Appeals: The Alaska Forest Association and other industry commenters were opposed to any additional wilderness. Others recommended that remaining roadless areas should be managed for primitive recreation of old-growth habitat and protected from logging and road building. A letter from Angoon with 48 signatures recommended that areas along the Chatham Strait be protected as subsistence areas. There should not be any logging, road building, or mining. The City of Tenakee Springs commented that people that know the area called "Pavlof-East Point" doubt that it is a roadless area because of the Forest Service work center, the road systems, the logging camp, and other developments in the area. They also point out that the economy of their community is much more closely connected to fishing, tourism, and subsistence than logging. In 1996, the Alaskan Visitors Association (AVA) proposed the following recreation developments for Pavlof Harbor: a day-use recreation facility for 100 persons, a leased proprietary camp for 15 persons, boardwalks, paths, and trails. The Juneau Convention and Visitors Center recommended that the area be managed to provide a high-quality sport fishing experience.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No comments on project level NEPA analysis are available for the roadless area.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended Roadless Areas 317, 318, 319, 321, 323, and 325 for LUD II protection. They indicated it is more critical now than ever before that these remaining wild areas on Chichagof are protected. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 319 for permanent protection as LUD II.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

The president of the Hoonah Indian Association asked for the protection, conservation, and responsible management of this roadless area because of its special interest to the Huna People.

A number of cave/karst experts and other individuals stated that East Chichagof and the North Central Prince of Wales Biogeographic Provinces contain some of the most highly developed karst lands in the Tongass. It was noted that protection of a combination of Freshwater Bay (#325), Game Creek (#323), Tenakee Ridge (#321), and Pavlov/East Point (#319) Roadless Areas would create a truly world class karst reserve for the East Chichagof Biogeographic Province.

(2) Nearby Roadless and Wilderness Areas and Uses: Tenakee Ridge Roadless Area (321) lies to the west. The Indian River roaded area varies from 1 to 4 miles wide and separates these two roadless areas. The Freshwater Bay Roadless Area (325) is located 2 to 3 miles north of the Pavlof-East Point Roadless Area across Freshwater Bay. Trap Bay Roadless Area (312) lies to the south, separated by roaded and harvested areas and the 2- to 3-mile wide Tenakee Inlet. The closest wilderness is the Kootznoowoo Wilderness on Admiralty Island, on the east side of the Chatham Strait. The West Chichagof-Yakobi Wilderness lies on the other side of Chichagof Island, approximately 23 miles to the west. These areas receive low to moderate recreation and subsistence use.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	40	60
Sitka (Pop. 8,835)	50	100
Hoonah (Pop. 860)	20	40
Angoon (Pop. 572)	25	30

Tenakee Springs is the closest town to this area that has Alaska Marine Highway service.

(4) Relative Contribution to the National Wilderness Preservation System: The Pavlof-East Point Roadless Area is located on the eastern coast of Chichagof Island. The northeastern border follows Freshwater Bay, while the southwestern border follows roaded areas. Chatham Strait lies to the east. The roadless area ranges from sea level to over 1,300 feet in elevation. The roadless area includes the Pavlof River, Pavlof Lake, a waterfall, Pavlof Bay, and several small islands in Freshwater Bay.

Overall, the Pavlof-East Point Roadless Area has moderate natural integrity and high apparent naturalness when viewed from salt water. The natural integrity of the roadless area and its apparent naturalness have been modified by public recreation cabins, trails around the Pavlof Lake area, timber harvest and roads along the entire landward boundary, the two fish passes constructed in the Pavlof drainage, and the old mechanical equipment around Pavlof Lake left from the saltery and fish packing plant in the early 1900's. There is a low opportunity for solitude and a moderate opportunity for primitive recreation within the roadless area due to the small size of the roadless area and developments on adjacent land.

Approximately 19 percent of the roadless area was inventoried as distinctive for the character type from a visual perspective. Pavlof Harbor is unique because it offers protection from the weather on four sides.

The roadless area includes about 1,518 acres of high-volume, old-growth forest. Of these acres, approximately 276 are mapped as high-volume, coarse-canopy old growth.

The roadless area is classified as being in the East Chichagof Island Biogeographic Province and makes up less than 1 percent of the province. It is one of 12 inventoried roadless areas found in the province that collectively make up about 72 percent of the province. The province contains the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness, which make up 6 percent of the province. The province also includes all or portions of three LUD II areas, which make up approximately 25 percent of the province. Approximately 79 percent of the province is unroaded.

The Pavlov-East Point Roadless Area lies completely within the Northeast Chichagof Fjordlands Ecological Section. This portion represents 1 percent of the entire ecological section, which is well represented in other non-development LUDs (26 percent) and a small portion (7 percent) is within LUD II.

This roadless area is entirely within the Freshwater Bay Carbonates Ecological Subsection; this portion of the roadless area represents 2 percent of the entire ecological subsection which is well represented in non-development LUDs (28 percent), but is not represented in wilderness or LUD II.

The Pavlof-East Point Roadless Area was rated at 16 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, it is ranked 98th from the highest (along with four other areas) out of the 109 Tongass inventoried roadless areas.

There is national and some local support for managing the area in a roadless condition but there is little support for designating the area as a wilderness. The WARS score for the area is low relative to other areas of Southeast Alaska, and the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness are in the biogeographic province. Designation of the area would add Congressional protection to about 2 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under

Congressional protection. The roadless area is small and narrow and it is adjacent to roaded and harvested areas. These factors indicate that the relative contribution to the National Wilderness System would be low to moderate.

V. Environmental Consequences

The Pavlof-East Point Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 59 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 41 percent of the roadless area. The land in the development LUDs provides an estimated 255 acres that are suitable for timber production (less than 2 percent of the suitable acres on the Hoonah Ranger District). Approximately 14 of the suitable acres are classified as high-volume, coarse-canopy old growth. The values associated with the natural settings of the roadless area could be affected by developments allowed by the Forest Plan. The high scenic values are mostly protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and development and recreation developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including scenic values, would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to about 2 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber sale projects would not be allowed, and the potential for other development, including recreation, mineral, and hydroelectric, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including scenic values, would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to about 2 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 319 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								4,731
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	2,684	2,684	2,684	2,684	2,684		2,684	
Semi-remote Recreation	109	109	109	109	109		109	
Recommended LUD II						4,731		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	664	664	664	664	664		664	
Modified Landscape	492	492	492	492	492		492	
Timber production	782	782	782	782	782		782	
TOTAL	**4,731**	**4,731**	**4,731**	**4,731**	**4,731**	**4,731**	**4,731**	**4,731**
Suitable Timber Lands	255	255	255	255	255	**0**	255	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Tenakee Ridge (321)

ACRES (NFS): 21,854

BIOGEOGRAPHIC PROVINCE: East Chichagof Island

ECOLOGICAL SECTION: Northeast Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 18

I. Overview and Description

(1) Location and Access: Tenakee Ridge Roadless Area is located on Chichagof Island approximately 15 miles south of Hoonah. The southern boundary is the small City of Tenakee Springs, which is located on Tenakee Inlet. The roadless area is bounded on all other sides by areas developed for timber management, except for a half mile-wide area in the northwest that borders Roadless Area 323. Access to the southern portion of the area is over State lands east of Tenakee Springs along the Indian River road system. Access to the northern portion is by the Hoonah road system. Tenakee Springs has regular scheduled small plane service and is on the Alaska Marine Highway route. The roadless area itself contains no shorelines for boat access. Access to the interior is by foot or helicopter; there are no areas suitable for landing wheeled airplanes.

(2) History: At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Forest archaeologists have identified petroglyphs and pictographs, Alaska Native garden sites, an Alaska Native smokehouse, a village site, and other related sites in the area. There was a working salmon and crab cannery in Tenakee Springs in 1942.

(3) Geography and Topography: This roadless area is a rugged, mountainous area with ridges and peaks reaching over 3,500 feet. The highest point is over 3,900 feet. The area is basically the ridge system left between two heavily developed areas that are accessed by the adjacent Kennel Creek and Indian River road systems. Lower slopes are generally densely forested. Upper slopes and summits appear barren but support a variety of alpine vegetation. There are approximately 3,445 acres of alpine and 1,707 acres of rock but no ice or snow features mapped in this area. This roadless area does not have a saltwater shoreline.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The roadless area is classified as the East Chichagof Island Biogeographic Province. This province has a dryer and colder climate than the outer coast of Chichagof Island and the winter snow pack is generally greater. Chichagof Island is deeply dissected into three peninsulas that may be functioning biologically more like separate islands. Vegetation in this province represents a modal similar to Admiralty Island Province.
Mountain elevations in this roadless area vary from 2,300 to 3,900 feet. Streams are generally larger and longer in this area than on the other islands of Southeast Alaska. Upper slopes and summits appear barren from a distance, but many of the peaks offer a variety of alpine vegetation as well as numerous rock outcropping.

Ecological Section/Subsection. The Tenakee Ridge Roadless Area is contained entirely within the Northeast Chichagof Fjordlands Ecological Section (M247C). This area is represented by one ecological subsection (see table below). The Freshwater Bay Carbonates Ecological Subsection has a bedrock mixture of carbonate and noncalcareous sedimentary rocks with bits of volcanic and intrusive igneous rocks. Many formations of almost pure carbonate form impressive mountains and ridges with extensive areas of exposed rocks containing pits and sinkholes. Atop the mountains, alpine vegetative communities thrive. The mid to

lower elevations of the moderately sloped mountains have well drained soils that support productive hemlock spruce forests. In the valleys where glacial tills and glaciomarine sediments exist, non-forested wetlands are present. Where streams flow through calcareous colluvium, rich calcareous fens develop at the stream base creating a diverse and rare plant community (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Northeast Chichagof Fjordlands	Freshwater Bay Carbonates	100%

(b) Soils: Glaciers have played an important part in the placement and character of soil parent material in this roadless area. Soil development is also influenced by high levels of rainfall, cool summer temperatures, a short growing season, and moderately low soil temperatures. Under such conditions, organic matter decomposes slowly and tends to accumulate in areas where it is being produced or deposited. Due to the rapid loss of material by erosion and efficient rainwater runoff, shallow soils with good drainage develop on steeper slopes.

Deep, well-drained soils commonly occur below shallow soils on gentler slopes where transported soil materials have collected. Drainage improves with increased slope gradient; however, as slopes become steeper, soil depths become much shallower. In riparian areas, soil zones tend to contain sand and gravels as a result of flood deposition. Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils, or extremely shallow and rocky.

(c) Vegetation: Western hemlock-Sitka spruce forests dominate the overstory of this roadless area. The understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club, and the forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Plant communities are characterized by low shrubs, grasses, and sedges. At elevations generally above 2,000 feet, subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra. Less than 100 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Approximately 3,445 acres of alpine vegetation are mapped in the area.

There are approximately 11,363 acres mapped as forest land of which 6,375 acres or 56 percent are mapped as productive old-growth forest. Of the productive old growth, 2,696 acres or 42 percent are mapped as high-volume old-growth forest. The productive old growth includes about 439 acres of high-volume, coarse-canopy old growth. There are no acres of second growth forest where timber harvest has occurred in the past.

(d) Fish Resources: The Tenakee Ridge Roadless Area possesses the headwaters and tributary channels for some of the large fish-producing streams that flow through adjacent roaded areas. Examples are the North and South Fork of Freshwater Creek, Kennel Creek, and the Indian and Pavlof Rivers. However, the ADF&G Anadromous Waters Catalogue (1998) identifies no fish-bearing streams within the roadless area.

(e) Wildlife Resources: The roadless area supports brown bear and Sitka black-tailed deer. Smaller mammals include marten and red squirrel. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island.

(5) Management Direction and Current Uses: The roadless area was allocated to three different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These three LUDs are Timber Production, Scenic Viewshed, and Old-growth Habitat.

LUD	Acres
Timber Production	19,220
Scenic Viewshed	69
Old-growth Habitat	2,565

Most of the roadless area, approximately 88 percent, was allocated to LUDs that permit development (Timber Production, Scenic Viewshed). Approximately 88 percent of the roadless area was allocated to the Timber Production LUD. About 69 acres near Freshwater Bay were allocated to the Scenic Viewshed LUD, accounting for less than 1 percent of the roadless area.

Approximately 12 percent of the roadless area was allocated to one non-development LUD, which is the Old-growth Habitat LUD. Recreation activities include: hiking, dispersed camping, hunting, upland bird hunting, ice fishing, cross-country skiing, viewing wildlife, kayaking, and lake fishing. No outfitter/guide permits were issued for the roadless area in 1999. There are no special use permits. The area receives some subsistence use, mainly from residents of Tenakee Springs, Hoonah, and Freshwater Bay.

(6) Appearance (Apparent Naturalness): Most of the roadless area appears unmodified, with roads and timber harvest activity evident just outside the roadless area boundary. The Kennel Creek logging camp site lies to the northwest. These developments affect the apparent naturalness of adjacent areas within the roadless area.

(7) Surroundings (External Influences): The Tenakee Ridge Roadless Area is completely landlocked, primarily by National Forest System land. Adjacent to this roadless area (to the north and west) is the Kennel Creek logging camp and road system. This area was developed between 1962 and 1982. The Hoonah and Kennel Creek road systems connect at the closed Kennel Creek logging camp. The logging camp was constructed in the mid-1960s. This camp can periodically open and close depending on the timber work load. A Forest Service work station is also located at the Kennel Creek logging camp.

The Tenakee Springs townsite lies to the south of the roadless area. Tenakee Springs is served by the Alaska Marine Highway system and regular scheduled small plane service. The Indian River road system separates the western section of the Tenakee Ridge Roadless Area from the town. This area also was intensively developed in 1977. The Indian River and the Hoonah roads intersect at the northwest boundary of the roadless area.

(8) Attractions and Features of Special Interest: There are no specific attractions or special features in this roadless area. No recreation places are within this roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: There have been changes to the roadless area due to roading and timber harvesting along the boundaries and more accurate mapping. This has reduced the area compared to 1989. Several smaller areas along the boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The Tenakee Ridge Roadless Area has not been modified. However, the natural integrity and apparent naturalness of the landscape is noticeably altered by the roads and by the appearance of the timber harvest along the boundaries. The roadless area is less suitable for wilderness classification because of the surrounding roads and timber harvest activity.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: Tenakee Ridge Roadless Area has a moderate opportunity for solitude and a high opportunity for primitive recreation. The area is approximately 12 miles long and up to 6 miles wide and is remote with no formal trails or recreation developments to concentrate use. There are no public recreation cabins in this area. The chief access into the Tenakee Ridge Roadless Area is by walking from roaded and private lands.

The roadless area is extremely steep, rising to over 3,900 feet in elevation. The steep nature of the landforms and the presence of brown bears present a moderate degree of challenge and the need for woods skills and experience.

The area provides primarily semi-primitive non-motorized recreation opportunities.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	17,838	82%
Roaded Modified (RM)	4,016	18%

No recreation places are within this roadless area.

ROS Class	# of Rec. Places	Total Acres
SPNM	0	0
RM	0	0

There are no developed recreation facilities in the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Tenakee Ridge Roadless Area Roadless Area was 24 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 18. This rating reflects the degree of developments in adjacent areas and the associated effects on its wilderness attributes.

(4) Ecologic and Geologic Values: The roadless area has no known unique ecologic or geologic values except the hot springs which is located to the south of the area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed two VCUs, Kennel Creek (217) and Pavlof River (218), as primary sportfish producers. No VCUs were listed as primary salmon producers (ADF&G, 1998).

The Tenakee Ridge Roadless Area possesses the headwaters and tributary channels for some of the large fish-producing streams that flow through adjacent roaded areas. Examples are the North and South Fork of Freshwater Creek, Kennel Creek, and the Indian and Pavlof Rivers. However, the ADF&G Anadromous Waters Catalogue (1998) identifies no fish-bearing streams in this area.

(b) Wildlife Resources: The roadless area supports brown bear and Sitka black-tailed deer. Mammals present in the area include wolves, marten, and red squirrel. Based on data collected from 1985 to 1994, VCU 215 at the end of Freshwater Bay was listed among the VCUs in the second 25 percent of brown bear harvest (ADF&G, 1998). Moose are reported to inhabit Chichagof Island but they have not been reported from this area. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island.

(c) Threatened, Endangered, and Sensitive Species: This roadless area contains no known threatened or endangered species. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Hoonah Ranger District.

(d) Karst, Cave, and Other Geologic Resources: A portion of this area is underlain by limestone or marble, and karst and cave resources are known to have developed there. Only limited inventory has occurred in this area so the extent of karst and cave development is not fully understood. The limestones and marbles found here are commonly the ridge-forming rock types. Extensive karst systems are known from the intensity and numbers of features identified during limited inventory and air photo interpretations. Paleontological discoveries are likely, as well as archaeological finds. Because of the thickness of the limestone and marble in this area, vertical pits and cave systems of record depth are possible. Extensive areas of limestone and marble are exposed from sea level to the ridge tops in these glaciated valleys. The karst systems found here extend from the alpine (or higher elevations) to the sea, providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. Karst resources in this roadless area represent 8,349 acres, or 38 percent of the roadless area. Approximately 70 percent of these karst resources are classified as High Vulnerability Karst. There are no known glaciers or other unique geologic features.

(5) Scientific and Educational Values: There are opportunities to study karst systems, as well as forests, stream systems, and wildlife in an area close to the City of Tenakee Springs.

(6) Scenic Values: The visual character type is Admiralty-Chichagof. This character type exhibits great diversity. For the most part, landforms in this character type are rounded, but notable exceptions exist especially on the northern portions of Admiralty and Chichagof Islands where mountainous terrain tends to be rugged and snow-covered. The area is viewed as unmodified from Tenakee Inlet, Freshwater Bay, and the community of Tenakee Springs. The adjacent timber harvest activities can be viewed from Kennel Creek and when viewing the area from along the eastern ridgeline.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: Freshwater Bay, a small boat route and saltwater use area; the Tenakee Springs community; Kennel Creek, a boat anchorage; Tenakee Inlet, a part of the Alaska Marine Highway and a small boat route.

Approximately 28 percent of this roadless area was inventoried Variety Class A (possessing landscape diversity that is unique for the character type). Sixty-five percent of the area was inventoried Variety Class B (possessing landscape diversity that is common for the character type). Approximately 7 percent was inventoried in Variety Class C (possessing a low degree of landscape diversity).

Approximately 47 percent of this area was inventoried in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. Approximately 52 percent of the area was inventoried in EVC Type V, where changes in the landscape are obvious to the average person, and appear to be major disturbances.

(7) Social, Cultural, and Historical Values: At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Forest archaeologists have identified petroglyphs and pictographs, Alaska Native garden sites, the remains of an Alaska Native smokehouse, a village site, and other related sites. There was a working salmon and crab cannery in Tenakee Springs in 1942.

Recreation activities include: hiking, dispersed camping, big game hunting, small game hunting, upland bird hunting, ice fishing, cross-country skiing, viewing wildlife/fish, stream fishing, waterfowl hunting, kayaking, and lake fishing. No outfitter/guide permits were issued for the roadless area in 1999. There are no special use permits. The area receives some subsistence use, mainly from residents of Tenakee Springs, Hoonah, and the Kennel Creek logging camp. VCUs 215, 217, and 218, all along the east side of Freshwater Bay, were listed among the VCUs

with the highest community fish and wildlife values by ADF&G (1998). Those three VCUs plus VCU 220 account for the majority of the land in this roadless area and were listed among those VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The boundaries of the Tenakee Ridge Roadless Area are defined by the developments on the west, north, and east sides of this area. The Tenakee Springs townsite boundary is the southern border of this roadless area. None of these boundaries are based on well-defined topographic features. There do not appear to be any opportunities to move the borders to create well-defined boundaries.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Cruise ships travel through Chatham Straight enroute to Glacier Bay. Many people fly into the area for sport fishing. There is the potential for some of these tourists to be drawn to hunt, sightsee, and camp in the roadless area. There is a potential for outfitter/guide permits, trail construction, and public recreation cabins. In the Tongass Land Management Plan, an alpine trail has been proposed in VCU 215. The potential exists for an increase in big game hunting. If the population of Tenakee increases, the probability of personal use of wood products will expand.

In 1996, the Alaska Visitors Association (AVA) proposed a backcountry recreation lodge for 100 persons, hut-to-hut hiking for 25 persons, and mountain biking recreation facilities for the Indian River drainage basin.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resources: There are plans to install incubator boxes in underutilized rearing areas of the South Fork of Freshwater Creek.

(4) Wildlife Resources: There are no wildlife enhancement projects planned for the Tenakee Ridge Roadless Area.

(5) Timber Resources: There are 6,375 acres inventoried as productive old-growth forest in the roadless area. None of the area is mapped as second growth. Of this, approximately 3,408 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,309 acres or 6 percent of this roadless area are estimated to be suitable for timber production. Approximately 556 of the suitable acres are mapped as high-volume old growth; of these acres, 31 are mapped as high-volume, coarse-canopy old growth. The potential for managing timber in the roadless area is high because the nearby road systems and logging camp make timber management economical.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present; there are no know epidemic disease occurrences.

(7) Minerals: The US Geological survey of 1984, identified the area as having mineral development potential. The USGS Mineral Resource Data website (2001) shows a copper resource within the area.

(8) Transportation and Utilities: There are no transportation or utility corridors present or planned in the roadless area. A Potential Transportation or Utility Corridor LUD from Tenakee Springs to Hoonah is located just west of the roadless area.

(9) Water Availability and Use: No public recreation cabins or other facilities exist to create a water demand. There are no existing or planned hydroelectric or domestic water projects in the area.

(10) Areas of Scientific Interest: There are extensive karst resources in this roadless area. The mapped karst resources encompass approximately 8,349 acres or 38 percent of the roadless area.

(11) Land Use Authorizations: Current outfitter/guide special use permits are expected to continue. An increase in outfitter/guides using the area is probable.

(12) Land Status: The roadless area is entirely National Forest Systems land.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The local issues concerning this area are the continued harvesting and roading of the forest lands, the effects on fisheries and wildlife habitat caused by logging, maintaining the visual quality of high-interest areas, maintaining lifestyles, the location of log transfer facilities, the distribution of harvest volume classes, and the tradeoffs between environmental protection measures and the economics of the harvest activities.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Freshwater Bay Roadless Area. In 2001, HR 2908 proposed that the roadless area be designated as LUD II and managed in an unroaded condition.

(c) Public Input During Forest Plan Revisions and Appeals: The Alaska Forest Association and other industry commenters were opposed to any additional wilderness; they recommended that the area be managed for timber production. Others recommended that remaining roadless areas should be managed for primitive recreation of old-growth habitat and protected from logging and road building. A letter from Angoon with 48 signatures recommended that areas along the Chatham Strait be protected as subsistence areas. There should not be any logging, road building, or mining. The City of Tenakee Springs commented that people who know the area doubt that many of the areas mapped as roadless areas in TLMP were truly roadless areas because of the extensive road systems, logging, and other developments in the area. They also point out that the economy of their community is much more closely connected to fishing, tourism, and subsistence than it is to logging. They recommended that the area near Tenakee Springs be managed either as Old Growth Habitat or Remote Recreation. In 1996, the Alaska Visitors Association (AVA) proposed a backcountry recreation lodge for 100 people, hut-to-hut hiking for 25 people, and mountain biking recreation facilities for the Indian River drainage basin.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No comments on project level NEPA analysis are available for the roadless area.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 321 for permanent protection as LUD II. SEACC recommended Roadless Areas 317, 318, 319, 321, 323, and 325 for LUD II protection. They indicated it is more critical now than ever before that these remaining wild areas on Chichagof are protected.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

A number of cave/karst experts and other individuals stated that East Chichagof and the North Central Prince of Wales Biogeographic Provinces contain some of the most highly developed karst lands in the Tongass. It was noted that protection of a combination of Freshwater Bay (#325), Game Creek (#323), Tenakee Ridge (#321), and Pavlov/East Point (#319) Roadless Areas would create a truly world class karst reserve for the East Chichagof Biogeographic Province.

The president of the Hoonah Indian Association asked for the protection, conservation, and responsible management of this roadless area because of its special interest to the Huna People.

(2) Nearby Roadless and Wilderness Areas and Uses: Tenakee Ridge Roadless Area is nearly surrounded by roaded and harvested areas. It is connected to the Game Creek Roadless Area (323) by a half-mile wide area in the northwest. Freshwater Bay Roadless Area (325) is located approximately one mile to the north, on the other side of the Hoonah/Kennel road system and associated harvest units. The Kennel Creek-East Point harvest road system and associated harvest units separate the Pavlof/East Point Roadless Area (319) from the Tenakee Ridge Roadless Area. The closest wilderness is the Kootznoowoo Wilderness on Admiralty Island, on the east side of the Chatham Straight. The West Chichagof-Yakobi Wilderness lies on the other side of Chichagof Island, approximately 18 miles to the west. These areas receive low to moderate recreation and subsistence use.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	40	70
Sitka (Pop. 8,835)	50	100
Hoonah (Pop. 860)	15	50
Angoon (Pop. 572)	30	35

Tenakee Springs is adjacent to the Tenakee Ridge Roadless Area and has regular Alaska Marine Highway service.

(4) Relative Contribution to the National Wilderness Preservation System: Tenakee Ridge Roadless Area is located on Chichagof Island, just north of Tenakee Springs. The southern boundary is the small City of Tenakee Springs, which is located on Tenakee Inlet. The roadless area is bordered on all other sides by areas developed for timber management, except for a half mile-wide area in the northwest that borders Roadless Area 323. This roadless area is a rugged, mountainous area with ridges and peaks reaching over 3,500 feet. The highest point is over 3,900 feet.

Overall, the Tenakee Ridge Roadless Area has moderate natural integrity and high apparent naturalness. The natural integrity of the roadless area and its apparent naturalness have been modified by timber harvest and roads along nearly the entire boundary. There is a moderate opportunity for solitude and a high opportunity for primitive recreation within the roadless area.

Approximately 28 percent of the area was inventoried as distinctive for the character type from a visual perspective. Karst resources in this roadless area represent 8,364 acres, or 38 percent of the roadless area. Approximately 70 percent of these karst resources are classified as high vulnerability karst.

The roadless area includes about 2,696 acres of high-volume, old-growth forest. Of these acres, approximately 439 are mapped as high-volume, coarse-canopy old growth.

The roadless area is classified as being in the East Chichagof Island Biogeographic Province and makes up about 2 percent of the province. It is one of 12 inventoried roadless areas found in the province that collectively make up about 72 percent of the province. The province contains the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness, which make up 6 percent of the province. The province also includes all or portions of three LUD II areas, which make up approximately 25 percent of the province. Approximately 79 percent of the province is unroaded.

The Tenakee Ridge Roadless Area lies completely within the Northeast Chichagof Fjordlands Ecological Section. This portion represents 5 percent of the entire ecological section, which is well represented in non-development LUDs (26 percent) and a small portion (7 percent) is within LUD II.

This roadless area is entirely within the Freshwater Bay Carbonates Ecological Subsection; this portion of the roadless area represents 8 percent of the entire ecological subsection, which is well represented in non-development LUDs (28 percent), but is not represented in wilderness or LUD II.

The Tenakee Ridge Roadless Area was rated at 18 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, it is ranked 84th from the highest (along with 8 other areas) out of the 109 Tongass inventoried roadless areas.

There is national and some local support for managing the area in a roadless condition but there is little support for designating the area as a wilderness. The WARS score for the area is low relative to other areas of Southeast Alaska, and the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness are in the biogeographic province. Designation of the area would add Congressional protection to about 8 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection. The roadless area is relatively small and narrow and it is nearly surrounded by roaded and harvested areas. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. These factors indicate that the relative contribution to the National Wilderness System would be low to moderate.

V. Environmental Consequences

The Tenakee Ridge Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 12 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 88 percent of the roadless area. The land in the development LUDs provides an estimated 1,309 acres that are suitable for timber production (7 percent of the suitable acres on the Hoonah Ranger District). Approximately 31 of the suitable acres are classified as high-volume, coarse-canopy old growth. The values associated with the natural settings of the roadless area could be affected by developments allowed under the Forest Plan. The high karst values are protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and development and recreation developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including karst, old growth, and scenic values, would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to about 8 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber sale projects would not be allowed, and the potential for other development, including recreation, mineral, and hydroelectric, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including karst, old growth, and scenic values, would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to about 8 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 321 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								21,854
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	2,565	2,565	2,565	2,565	2,565		2,565	
Semi-remote Recreation								
Recommended LUD II						21,854		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	69	69	69	69	69		69	
Modified Landscape								
Timber production	19,220	19,220	19,220	19,220	19,220		19,220	
TOTAL	**21,854**	**21,854**	**21,854**	**21,854**	**21,854**	**21,854**	**21,854**	**21,854**
Suitable Timber Lands	1,309	1,309	1,309	1,309	1,309	**0**	1,309	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Game Creek (323)

ACRES (NFS): 51,436

BIOGEOGRAPHIC PROVINCE: East Chichagof Island

ECOLOGICAL SECTION: Northeast Chichagof Fjordlands and Baranof-Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 18

I. Overview and Description

(1) Location and Access: The Game Creek Roadless Area is located in the middle of Chichagof Island. Huna Totem and Sealaska Corporation lands, the town of Hoonah, and forest roads and associated timber harvest units border the area to the north and northwest. To the south and southeast are Tenakee Inlet and a small portion of the Tenakee Springs townsite boundary. The Salt Lake Bay road system and associated timber harvest units border the area to the southwest. The Narrows, Port Frederick, and a forest road and associated harvest units border the area to the west. Roads and timber harvest units extend into the area along drainage channels almost dividing the area into four separate sections.

Tenakee Springs and Hoonah are the closest communities to the Game Creek Roadless Area. Tenakee Springs is located adjacent to the area. Hoonah is located approximately 5 miles northeast. Both communities are on the Alaska Marine Highway route and have scheduled plane service. The city of Juneau, the closest larger community, is located approximately 40 air miles northeast of the area. The Game Creek Roadless Area can be easily accessed from Tenakee Springs and Hoonah via existing road systems and/or walking. Direct access is via powerboat or floatplane. Access to the interior is by foot or helicopter. There are no areas suitable for landing wheeled airplanes.

(2) History: Port Frederick is adjacent to the Game Creek Roadless Area and was named in 1794 by Captain Vancouver. At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout the area. The forest archaeologist has identified an Alaska Native village site, cache pits, shell middens piles, an old smokehouse/cabin, petroglyphs and Alaska Native burial sites in the area.

(3) Geography and Topography: The Game Creek Roadless Area is mountainous with one large U-shaped valley in the northwest corner and many V-shaped valleys. The northern area is mostly mountain ridges, but the Upper Game Creek and Seagull Creek drainages provide wide, open areas with heavy ridge systems to the southeast and west in the central portion of this roadless area. The Game Creek Roadless Area also contains part of the Freshwater Creek drainage. A heavy ridge system running northwest to southeast with some associated flat ground is located in the southern portion of this roadless area. Most of the valleys have streams that flow year round. There are 18 miles of saltwater shoreline, 3,745 acres of alpine tundra, and 2,527 acres of rock. There is one four acre island included in the area.

(4) Ecosystem:

(a) Classification: Biogeographic Province. This area is located within the East Chichagof Island Biogeographic Province. This province has a dryer and colder climate than the outer coast of Chichagof Island and the winter snow pack is generally greater. Chichagof Island is deeply dissected into three peninsulas that may be functioning biologically more like separate islands. Vegetation in this province represents a modal condition similar to Admiralty Island Province.

Ecological Section/Subsection. The Game Creek Roadless Area is contained almost entirely within the Northeast Chichagof Fjordlands Ecological Section (M247C) with portions within the Baranof-Chichagof Fjordlands Ecological Subsection (M247B). This area is represented by three ecological subsections (see table below);however, the Freshwater Bay Carbonates Ecological Subsection occupies almost 100 percent of the roadless area. It has a bedrock mixture of carbonate and noncalcareous sedimentary rocks with bits of volcanic and intrusive igneous rocks. Many formations of almost pure carbonate form impressive mountains and ridges with extensive areas of exposed rocks containing pits and sinkholes. Atop the mountains, alpine vegetative communities thrive. The mid to lower elevations of the moderately sloped mountains have well drained soils that support productive hemlock-spruce forests. In the valleys where glacial tills and glaciomarine sediments exist, non-forested wetlands are present. Where streams flow through calcareous colluvium, rich calcareous fens develop at the stream base creating a diverse and rare plant community (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Northeast Chichagof Fjordlands	Freshwater Bay Carbonates	100%
	Point Adolphus Carbonates	<1%
Baranof-Chichagof Fjordlands	North Chichagof Granitics	<1%

(b) Soils: Glacial history has played an important part in the placement and character of soil parent material in this roadless area. The development of soils is influenced by high levels of rainfall, cool summer temperatures, a short growing season, and moderately low soil temperatures. Because of the high rainfall in this area, the available nutrients can be leached rapidly and exposed mineral soils are subject to erosion.

There are shallow soils with good drainage on the steeper slopes. The upper soils tend to be eroded by rainwater runoff. Deep, well-drained soils occur below shallow soils on gentler slopes where transported soil materials have collected.

The poorly-drained soils in Seagull Creek and Upper Game Creek are associated with low relief and impermeable subsurface layers. In locations with poor drainage, deep organic soils (muskegs) tend to form. This situation occurs where the soil material fails to provide sufficient internal drainage or where topography prevents external drainage.

Since these soil materials tend to be wet and have been associated with lower bearing strengths, these areas are generally not well-suited for road construction. Drainage improves with increased slope gradient. However, as slopes become oversteepened, soil depths become much shallower. In riparian areas, soils tend to contain sand and gravels as a result of flood deposition.

(c) Vegetation: Western hemlock-Sitka spruce forests dominate the overstory of the Game Creek Roadless Area. The understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Approximately 909 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Muskegs are dominated by sphagnum mosses, sedges, and shrubs of the heath family, and are interspersed among low elevation timber stands where drainage is restricted. Trees are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar.

Common marine plants in the near-shore waters include brown, red, and green algae, and eelgrass. Tideflats are found at the heads of many of the bays and are usually associated with stream estuaries. The tideflats generally support sea milkwort, glasswort, and algae. Beach meadows occur between the shore and the forest. Lower beach meadows are composed of beach ryegrass, reed bent grass, hairgrass, fescue

grass, beach lovage, goose tongue, and sedges. Upper beach meadow plants include yarrow, bedstraw, starwort, ferns, western columbine, and cow parsnip. Oregon crabapple, alder, devil's club, and blueberry occur along the border of the beach meadow and the forest.

At elevations generally above 2,000 feet, the plant communities are characterized by low shrubs, grasses, and sedges. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 29,658 acres of forested land in the area, of which 18,999 acres or 64 percent are mapped as productive old-growth forest. Of the productive old growth, 6,247 acres or 33 percent are mapped as high-volume old-growth forest. The productive old growth includes about 763 acres of high-volume, coarse-canopy old growth. There are 672 acres of second-growth forest where beach harvesting activities have occurred.

(d) Fish Resources: The Alaska Department of Fish and Game (ADF&G) rated fish resources in their Forest Habitat Integrity Program (1983). These ratings describe the value of VCUs for sport fish, commercial fish, and estuaries. One VCU partially located in the area, Tenakee Springs (220), was rated as highly valued for sport fish. Six VCUs partially or wholly within the area were rated as highly valued for commercial fish or estuaries. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 2000) listed Game Creek (204) as a primary sportfish producer.

Streams in this area provide habitat for pink, chum, coho, and sockeye salmon. Game Creek is a major anadromous stream. Seagull Creek has some pink, chum, and coho production. The Anadromous Stream Catalogue and Atlas (ADF&G, 2000) also lists Bear Creek as a fish-bearing stream in this area. There are many headwater tributaries within this roadless area for the large fish-producing streams located in adjacent roaded areas. These include the North and South Forks of Freshwater Creek and Indian River. Dolly Varden may occur in this area.

(e) Wildlife Resources: The Upper Game Creek area has been identified as having important wildlife habitat. Sitka black-tailed deer, marten, mink, brown bear, and river otter inhabit this roadless area. Critical deer winter range is located along Port Frederick on the west boundary of the Game Creek Roadless Area. Bald eagles use this shoreline to roost and nest. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island.

(5) Management Direction and Current Uses: The roadless area was allocated to four different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These four LUDs are Timber Production, Modified Landscape, Transportation and Utility System (TUS) and Old-growth Habitat. The TUS LUD is a secondary LUD that overlays the other land uses.

LUD	Acres
Timber Production	36,021
Modified Landscape	197
Transportation and Utility System	NA
Old-growth Habitat	15,219

Approximately 70 percent of this area (not including the LUD overlay) was allocated to two development LUDs (Timber Production and Modified Landscape). Most of this roadless area, approximately 70 percent, was allocated to the Timber Production LUD. Less than 1 percent of the roadless area was allocated to the Modified Landscape LUD. The Transportation and Utility System LUD overlay is located in the roadless area near Tenakee Springs, for a potential road corridor. Approximately 30 percent of the area was assigned to a non-development LUD, Old-growth Habitat.

No public recreation cabins or formal recreation trails are located within this roadless area. The closest public recreation cabin is located at nearby Salt Lake Bay. Recreation activities taking place in this roadless area include waterfowl hunting, hiking, saltwater shore fishing, beachcombing, kayaking, stream fishing, dispersed camping, picnicking, viewing wildlife/fish, viewing scenery, big game hunting, nature study, viewing from marine access,

boating, gathering forest products, cross-country skiing, small game hunting, upland bird hunting, and powerboat use. Outfitter/guides use the areas along Game and Seagull Creeks for hunting. No outfitter/guide use was identified in this area in 1999.

Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified six of the eight VCUs partially or wholly located within the area as subsistence use areas with a high sensitivity to disturbance. The remaining two VCUs in the area were identified as subsistence use areas with a moderate to high sensitivity to disturbance.

(6) Appearance (Apparent Naturalness): The area surrounding the Game Creek Roadless Area has been heavily modified by timber harvest activities. Roads and timber harvest units partially border the area to the north, east, south, and west and extend into the area along drainage channels, almost dividing the area into four separate sections. In addition, beach logging has occurred along most of the shoreline of the area. These areas are visible from locations within and adjacent to the area.

(7) Surroundings (External Influences): To the north of this area are Huna Totem and Sealaska private lands. These lands have been roaded and harvested. To the northeast, the roadless area is bordered by the Hoonah road system and developed areas that extend along the North Fork of Freshwater Creek. The Hoonah road system continues east and south to the closed Kennel Creek logging camp and the Indian River drainage. This road system forms the north border of the east portion of this roadless area and extends to the southeast corner of the area where the townsite of Tenakee Springs begins. Tenakee Inlet borders the area to the south. The Salt Lake Bay road system partially borders the area to the west. This road system provides access to units that were harvested in the mid-1980s.

These developed areas are visible from locations within the roadless area. The sights and sounds of motorized boats are also evident from some locations within the area. Small aircraft overflights for recreation access and service to the various communities and camps in the general vicinity are also apparent on occasion.

(8) Attractions and Features of Special Interest: The Game Creek Roadless Area, and Seagull Creek and Upper Game Creek basins have unusually large muskegs. These substantial openings create an environment for many and varied recreation opportunities, especially hunting and hiking. Game Creek is a major anadromous and resident fishing stream. The area contains five inventoried recreation places, which cover 1,199 acres, or 2 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of this roadless area changed in four main ways between 1989 and 2003. First, the boundaries of the non-National Forest System lands that partially border the area to the north have been extended to encompass an area of land that was formerly part of the roadless area. Second, beach logged areas that were excluded from the 1989 area are included within the 2003 area. Third, roads have been built and logging has taken place along two drainages that extend into the area and these areas are excluded from the 2003 area. Fourth, several small areas along the boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area surrounding the Game Creek Roadless Area has been heavily modified by timber management activities. Roads and timber harvest units partially border the area to the north, east, south, and west and extend into the area along drainage channels, almost dividing the area into four separate sections. In addition, beach logging has occurred along most of the shoreline of the area. These activities have affected the natural integrity of the area to the extent that this land may be less suitable for wilderness classification than other nearby roadless areas.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is moderate opportunity for solitude and a relatively high opportunity for primitive recreation in this area between centers of human activity. Even though there are road systems surrounding this roadless area, two of the systems are not readily accessible from populated areas and vehicles must be brought in by

boats. The recreation activities taking place in this roadless area are dispersed and encounters with other parties are infrequent.

The nearest public recreation cabin to the Game Creek Roadless Area is at Salt Lake Bay. The Seagull drainage landform allows easy walking access to this roadless area from Port Frederick. The large muskegs in the Game Creek Roadless Area provide a feeling of expanse for miles. Once accessed, the ridge system to the north and south provides a very isolated experience, although timber harvest modification may be seen.

The area provides primarily Semi-Primitive Non-Motorized recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	ACRES	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	42,338	82%
Semi-Primitive Motorized (SPM)	1,331	3%
Roaded Modified (RM)	7,759	15%

The area contains five inventoried recreation places, which cover 1,199 acres, or 2 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	0	0
SPM	4	1,067
RM	3	133

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Game Creek Roadless Area Roadless Area was 24 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 18. This rating is reflective of the degree of developments on adjacent lands and effects on wilderness attributes of the area.

(4) Ecologic and Geologic Values: This area, located on north Chichagof Island, is not part of a larger unroaded mainland area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed Game Creek (204), in the center of the roadless area running south from Port Frederick, as a primary sportfish producer. All VCUs were listed as secondary but none as primary salmon producers (ADF&G, 1998).

Streams in this area provide habitat for pink, chum, coho, and sockeye salmon. Game Creek is a major anadromous stream. The estimated annual peak escapement is 16,000 pink salmon for Game Creek, which also has excellent coho salmon smolt capability (ADF&G, 1998). Seagull Creek also has some pink and coho production. There are many headwater tributaries within this roadless area for the large fish-producing streams located in adjacent roaded areas. These include the North and South Forks of

Freshwater Creek and Indian River. The Anadromous Stream Catalogue (ADF&G, 2000) lists Bear Creek as a fish-bearing stream in this area. Dolly Varden may occur in this area.

(b) Wildlife Resources: The Upper Game Creek area has been identified as having important wildlife habitat. Sitka black-tailed deer, marten, mink, brown bear, and river otter inhabit this roadless area. Critical deer winter range is located along Port Frederick on the western boundary of the Game Creek Roadless Area. Bald eagles use this shoreline to roost and nest. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island.

Based on harvest data compiled from 1985 to 1995, VCU 202 between the end of Port Frederick and Tenakee Inlet and partially located in this area, was ranked in the top 25 percent of brown bear harvest areas on the Tongass. Another of the VCUs partially located in this area, Freshwater Bay (215), was ranked in the second 25 percent of brown bear harvest areas on the Tongass (ADF&G, 1998).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Hoonah Ranger District.

(d) Karst, Cave, and Other Geologic Resources: A portion of this area is underlain by limestone or marble, and karst and cave resources are known to have developed there. Only limited inventory has occurred in this area so the extent of karst and cave development is not fully understood. The limestones and marbles found here are commonly the ridge-forming rock types. Extensive karst systems are known from the intensity and numbers of features identified during limited inventory and air photo interpretations. Paleontological discoveries are likely as well as archaeological finds. Because of the thickness of the limestone and marble in this area, vertical pits and cave systems of record depth are possible. Extensive areas of limestone and marble are exposed from sea level to the ridge tops in these glaciated valleys. The karst systems found here extend from the alpine or higher elevations to the sea, providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. This represents 11,776 acres, or 23 percent of the roadless area. Approximately 70 percent of the karst acres are classified as high vulnerability karst. There are no glaciers or other unique geologic features.

(5) Scientific and Educational Values: The Seagull Creek and Upper Game Creek areas are geologically interesting because of their obvious glacially caused U-shaped valleys. These valleys are very wide in the bottom and have steep sidewalls to the north and south.

There are no Research Natural Areas (RNAs) in this roadless area. The city of Juneau, the closest larger community, is located approximately 40 air miles northeast of the area. Therefore, this area is relatively inaccessible to large numbers of school-age children. The area is more accessible to school-age children residing in the cities of Tenakee Springs and Hoonah and other nearby communities.

(6) Scenic Values: The visual character type of this area is Admiralty-Chichagof. The landforms in this area are generally rounded with mountain elevations varying from 2,300 to 3,400 feet. Upper slopes and summits appear barren from a distance, but offer a variety of alpine vegetation as well as numerous rock outcroppings. The Game Creek Roadless Area has rocky shorelines interspersed with small gravel beaches. Streams are larger and longer in this area than on other islands of Southeast Alaska. Tidal meadows associated with estuaries are common in this roadless area.

The area surrounding the Game Creek Roadless Area has been heavily modified by timber management activities. Roads and timber harvest units partially border the area to the north, east, south, and west and extend into the area along drainage channels almost dividing the area into four separate sections. In addition, beach logging has

occurred along most of the shoreline of the area. These areas are visible from locations within and adjacent to the area.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: Port Frederick, a part of the Alaska Marine Highway, a tour ship and small boat route, and a dispersed recreation area; Tenakee Inlet, a part of the Alaska Marine Highway, a tour ship and small boat route, a dispersed recreation area, and a boat anchorage; Game Creek, a dispersed recreation area; and Salt Chuck, a saltwater use area.

Approximately 14 percent of the acreage in the Game Creek Roadless Area was inventoried Variety Class A (possessing landscape diversity that is unique for the character type), 64 percent of this roadless area was inventoried in Variety Class B (possessing landscape diversity that is common for the character type), and 21 percent was inventoried in Variety Class C (possessing a low degree of landscape diversity).

Just over half (approximately 54 percent) of this roadless area is in Existing Visual Condition (EVC) I; these areas appear to be untouched by human activity. Two percent of the acreage is in EVC III, where the average person notices changes to the landscape but the natural appearance of the landscape remains dominant. Five percent of the acreage is in EVC IV, which are areas where changes in the landscape are easily noticed by the average person and may attract some attention. There appear to be disturbances but they resemble natural patterns. Approximately 39 percent is in EVC V where changes in the landscape are obvious to the average person and those changes appear to be major disturbances.

(7) Social, Cultural, and Historical Values: Port Frederick is adjacent to the Game Creek Roadless Area and was named in 1794 by Captain Vancouver. At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout the area. The forest archaeologist has identified an Alaska Native village site, cache pits, shell middens piles, an old smokehouse/cabin, petroglyphs and Alaska Native burial sites in the area. Tenakee Springs and Hoonah are the closest communities to the Game Creek Roadless Area. Tenakee Springs is located adjacent to the area. Hoonah is located approximately 5 miles northeast. The city of Juneau, the closest larger community, is located approximately 40 air miles northeast of the area.

Recreation activities taking place in this roadless area include waterfowl hunting, hiking, saltwater shore fishing, beachcombing, kayaking, stream fishing, dispersed camping, picnicking, viewing wildlife/fish, viewing scenery, big game hunting, nature study, viewing from marine access, boating, gathering forest products, cross-country skiing, small game hunting, upland bird hunting, and powerboat use. Outfitter/guides use the areas along Game and Seagull Creeks for hunting. No outfitter/guide use was identified in this area in 1999. Based on harvest data compiled from 1985 to 1995, one of the VCUs partially located in this area, Freshwater Bay (215), was ranked in the second 25 percent of brown bear harvest areas on the Tongass.

This area is an important subsistence use area for residents of Tenakee Springs and Hoonah. The portion of the roadless area extending along the shoreline of Tenakee Inlet accounted for greater than 15 percent of Tenakee Springs annual average deer harvest by Wildlife Analysis Area (WAA) from 1987 to 1994. The northwest portion of the area accounted for greater than 15 percent of Hoonah annual average deer harvest by WAA from 1987 to 1994. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified six of the eight VCUs partially or wholly located within the area as subsistence use areas with the highest sensitivity to disturbance. The remaining two VCUs in the area were identified as subsistence use areas with a moderate to high sensitivity to disturbance. Five of the eight VCUs partially or wholly located within this area were included among the highest value community use areas identified by ADF&G in their comments on the Tongass Land and Resource Management Plan EIS (1996).

(8) Manageability as Wilderness and Boundary Conditions/Changes: Huna Totem and Sealaska Corporation lands, the town of Hoonah, and forest roads and associated timber harvest units border the area to the north and northwest. To the south and southeast are Tenakee Inlet and a small portion of the Tenakee Springs townsite boundary. The Salt Lake Bay road system and associated timber harvest units border the area to the southwest. The Narrows, Port Frederick, and a forest road and associated harvest units border the area to the west. Roads and timber harvest units extend into the area along drainage channels almost dividing the area into four separate sections.

The roads and associated harvest areas separate the Game Creek Roadless Area from the Chichagof (#311), Tenakee Ridge (#321), and Freshwater Bay (#325) roadless areas. These nearby roadless areas were primarily assigned LUDs that allow timber harvest and road construction, with smaller areas assigned to the Old-growth Habitat LUD.

The Game Creek Roadless Area is irregularly shaped, with roads and harvest units bordering the area on all sides and extending along drainages into the center of the area. These activities have affected the natural integrity of the area to the extent that this land may be less suitable for wilderness classification than other nearby roadless areas.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: The Tongass Land Management Plan proposed the construction of an alpine trail in VCU 204. Increased hunting, fishing, and dispersed camping are possible in the Game Creek Roadless Area. Because the Game Creek Road system is closed to vehicles, dispersed camping in that area may increase. Bear hunters will not be able to access this area by driving.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: A potential for building of a fish passage in Freshwater Creek drainage exists. Lake Creek, identified as underutilized fisheries habitat, is being considered for sockeye salmon incubation boxes. A possible woody debris enhancement project also exists in the Game Creek Drainage.

(4) Wildlife Resources: No wildlife enhancement projects are currently identified.

(5) Timber Resources: There are 18,999 acres mapped as productive old growth in the roadless area. In addition, 672 acres of second growth have resulted from beach logging activities. Of these acres, 11,486 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 2,243 acres or 4 percent of this roadless area are estimated to be suitable for timber production. Approximately 509 of the suitable acres are mapped as high-volume old growth; 53 of these are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area is very high. The existing nearby road systems and logging camp at Kennel Creek make the management of this area for timber harvest economical. The Indian River Timber Sale EIS project area includes parts of the Game Creek Roadless Area and has had a Draft EIS and Final EIS produced. The Final EIS decision was overturned and additional analysis will be needed to complete the EIS. Another decision based on the additional analysis will need to be issued prior to implementation of any activities proposed in the EIS.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: The Geological Survey conducted in 1984 identified the Game Creek Roadless Area as having mineral development potential. There are epigenetic and disseminated and polymetallic veins, identified in this area. The USGS Mineral Resources Data website (USGS, 2001) shows an explored prospect for iron within this roadless area. This area contains an estimated 283 acres of undiscovered locatable mineral resources that are considered to have low potential for development (Brew et al., 1990; USDA Forest Service, 1991).

(8) Transportation and Utilities: The Potential Transportation and Utility System LUD overlay runs through the roadless area near Tenakee Springs. This LUD overlay is also adjacent to the northern border of this roadless area.

(9) Water Availability and Use: No developed recreation cabins or other facilities exist to create a demand for water in this area. There are no existing or planned hydroelectric or domestic water projects in the area.

(10) Areas of Scientific Interest: There are extensive karst resources in this roadless area. The mapped karst resources encompass approximately 11,776 acres or 23 percent of the roadless area. The peak southeast of Burnt Point has karst of mostly high vulnerability. The Seagull Creek drainage has karst of high vulnerability, with the exception of the area along Port Frederick. The mountains surrounding Game Creek all contain high vulnerability karst, and the karst areas in the mountains southwest of the Indian River exhibit medium to low vulnerability.

The Seagull Creek and Upper Game Creek areas are geologically interesting because of their obvious glacially caused U-shaped valleys. These valleys are very wide in the bottom and have steep sidewalls to the north and south.

(11) Land Use Authorizations: The current special use permits will probably continue. An increase in outfitter/guide use of this area is predicted.

(12) Land Status: The roadless area is completely National Forest System lands. Land within the roadless area has encumbrances. These encumbered areas are located in parts adjacent to land owned by the Sealaska Regional Corporation.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Most of the use in this roadless area is associated with the populations of Tenakee Springs and Hoonah. Residents of these communities access the area for hunting via boat or by driving or walking. Outfitter/guides use the areas along Game and Seagull Creeks for hunting.

The local issues concerning this area are continuing harvesting and roading of the timber lands, the effects on fisheries and wildlife habitat caused by logging, maintaining the visual quality of high interest areas, maintaining lifestyles, location of log transfer facilities, the distribution of harvest volume classes, and the tradeoffs between environmental protection measures and the economics of the harvest activities.

The majority of the people in Tenakee Springs and a significant portion of people in Hoonah consider this section of land as a subsistence area. People from these communities hunt and gather forest products for everyday use as well as for Alaska Native arts and crafts. Both communities feel there has been a reduction of these types of natural resources. These feelings are caused by the extensive roading and harvesting around their communities that were created by Alaska Pulp Corporation on National Forest System lands, and the Native Corporations of Huna Totem and Sealaska on their lands.

Another concern of Tenakee Springs is the potential connection of the Indian River road system with the Hoonah road system. Tenakee Springs is a small community accessed by the Alaska Marine Highway system, small boats, and regularly scheduled plane service. Residents are concerned that they will lose their isolated lifestyles if these two road systems are connected.

There is also a significant group of people in Hoonah that would like to see the Game Creek Roadless Area developed. These people feel that developing this area would stabilize the economy of their town by providing work for the existing logging camp at Hoonah.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Game Creek Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also proposed that the harvested areas along the shoreline within the area be protected as restoration areas.

(c) Public Input During Forest Plan Revisions and Appeals: This area was addressed in public input received during the Forest Plan revision and appeal. Many commenters (including the City of Tenakee Springs, Taku Conservation Society, Juneau Sierra Club, National Audubon Society, and Tenakee Fish and Game Advisory Board) stated that the important scenic, wildlife, fishing, and (especially) subsistence values and habitats of Tenakee Inlet, which borders the area to the south, must be protected.

They felt that the area has many natural values warranting protection and that there is much public support for protection and reducing timber harvest. Commenters requested that Management Area (MA) C29 be managed as Wilderness, Primitive Recreation, or Old Growth, for its high value wildlife habitat and high scenic value. Timber industry interests on the other hand requested that Management Areas (MAs) C29 and C32, which include parts of the Game Creek Roadless Area, be in Timber Production, adding that there is not much use of the MA29 area or justification for Scenic Viewshed or Modified Landscape allocations in MA C32. The scenic qualities of Chichagof Island in general were mentioned as very important to the tourism, tour boat, and guide service industries.

Parts of the area were identified in the Forest Plan appeal filed on behalf of the Hoonah Indian Association et al. This appeal identified Northeast Chichagof Island, which may include all or part of the Game Creek Roadless Area, as an important customary and traditional Hoonah hunting and fishing area. The appeal stated that this area has already suffered substantial deer habitat loss from past logging and deserves protection. Parts of the area were also identified in the appeal filed by the City of Tenakee Springs. The City of Tenakee Springs expressed concern that future plans for road building in the area were not adequately disclosed in the 1997 Tongass Land Management Plan Revision. The city also stated that the Forest Service needs to protect key areas in Tenakee Inlet to maintain their old growth character and limit future operations so that subsistence and sport use of deer are fully protected.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area is not within the project area of any recently completed project-level EISs.

(f) Public Input Expressed During Supplemental EIS Process: ADF&G noted that this roadless area is "ecologically roaded" from a brown bear perspective because virtually all brown bear home ranges in this area intersect roads (based on extensive brown bear radiotelemetry).

SEACC recommended Roadless Areas 317, 318, 319, 321, 323, and 325 for LUD II protection. They indicated it is more critical now than ever before that these remaining wild areas on Chichagof are protected. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 323 for permanent protection as LUD II.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

A number of cave/karst experts and other individuals stated that East Chichagof and the North Central Prince of Wales Biogeographic Provinces contain some of the most highly developed karst lands in the Tongass. It was noted that protection of a combination of Freshwater Bay (#325), Game Creek (#323), Tenakee Ridge (#321), and Pavlov/East Point (#319) Roadless Areas would create a truly world class karst reserve for the East Chichagof Biogeographic Province. Freshwater Bay and Game Creek are the two most critical components of this province because of their size and amount of remaining forested karst.

The president of the Hoonah Indian Association asked for the protection, conservation, and responsible management of this roadless area because of its special interest to the Huna People.

A number of individuals requested protection for Upper Tenakee Inlet.

(2) Nearby Roadless and Wilderness Areas and Uses: The Admiralty Island National Monument - Kootznoowoo Wilderness is located approximately 18 miles east of the area. The West Chichagof-Yakobi Wilderness is located approximately 22 miles to the west.

Non-National Forest System lands and roads and associated developed areas separate the Game Creek Roadless Area from the Chichagof (#311), Tenakee Ridge (#321), and Freshwater Bay (#325) roadless areas.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	40	65
Sitka (Pop. 8,835)	50	110
Hoonah (Pop. 860)	10	15
Angoon (Pop. 572)	30	40

The nearest Alaska Marine Highway service is at Tenakee Springs. Hoonah also has ferry service and this roadless area can be accessed from the Hoonah road system.

(4) Relative Contribution to the National Wilderness Preservation System: The Game Creek Roadless Area is located on Chichagof Island along the north shore of Tenakee Inlet. The southwestern borders follow the shoreline, while the other borders follow roaded areas. The roadless area is mountainous with a large U-shaped valley in the northwest corner and many V-shaped valleys. Elevations range from sea level to nearly 3,500 feet.

The Game Creek Roadless Area has moderate natural integrity and high apparent naturalness. Exceptions are the developed areas along the boundary that nearly divide the roadless area into three segments. Development in these areas disrupts the natural appearance of the landscape. There is a moderate opportunity for solitude and a relatively high opportunity for primitive recreation within the roadless area.

Approximately 14 percent of the area was inventoried as distinctive for the character type from a visual perspective. The roadless area has extensive karst resources, a wide U-shaped valley, and extensive muskegs areas that provide diversity.

The roadless area includes about 6,247 acres of high-volume, old-growth forest. Of these acres, approximately 763 are mapped as high-volume, coarse-canopy old growth.

The roadless area is classified as being in the East Chichagof Island Biogeographic Province and makes up about 5 percent of the province. It is one of 12 inventoried roadless areas found in the province that collectively make up about 72 percent of the province. Approximately 79 percent of the province is unroaded. The province contains the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness, which make up 6 percent of the province. The province includes all or portions of three LUD II areas, which make up approximately 25 percent of the province.

The Game Creek Roadless Area lies almost entirely within the Northeast Chichagof Fjordlands Ecological Section; it covers 11 percent of the section. The Northeast Chichagof Fjordlands Ecological Section is well represented in non-development LUDs (33 percent, including 7 percent within LUD II).

This roadless area is almost entirely within the Freshwater Bay Carbonates Ecological Subsection; this portion of the roadless area represents 20 percent of the entire ecological subsection which is well represented by non-development LUDs (28 percent), but not represented in wilderness or LUD II. A very small portion of this roadless area (less than 1 percent) is within the North Chichagof Granitics Ecological Subsection; this portion of the roadless area represents less than 1 percent of the entire ecological subsection. Approximately 19 percent of this ecological subsection is in existing wilderness, an additional 38 percent is in existing LUD II, and an additional 15 percent is protected by other existing non-development LUDs. The Point Adolphus Carbonates Ecological Subsection represents less than 1 percent of this roadless area; this portion of the roadless area represents less than 0.1 percent of the entire ecological subsection, which is well represented in other non-development LUDs (48 percent, including 16 percent of LUD II).

The Game Creek Roadless Area was rated at 18 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, it is ranked 84th from the highest (along with 8 other roadless areas) out of the 109 Tongass inventoried roadless areas.

There is national and local support for managing the area in a roadless condition but there is little support for designating the area as a wilderness. The WARS score for the area is low relative to other areas of Southeast Alaska, and the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness are in the biogeographic province. Designation of the area would add Congressional protection to about 20 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection. The roadless area is relatively small and fragmented and it is adjacent to roaded and harvested areas. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. These factors indicate that the relative contribution to the National Wilderness System would be low to moderate.

V. Environmental Consequences

The Game Creek Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 30 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 70 percent of the roadless area. The land in the development LUDs provides an estimated 2,243 acres that are suitable for timber production (12 percent of the suitable acres on the Hoonah Ranger District). Approximately 53 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains an estimated 283 acres of undiscovered locatable mineral resources that are considered to have low potential for development. The values associated with the natural settings of the roadless area could be affected by ongoing developments allowed by the Forest Plan. The high karst values are protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and development and recreation developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including karst, old growth, and scenic values, would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to about 20 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber sale projects would not be allowed, and the potential for other development, including recreation, mineral, and hydroelectric, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including karst, old growth, and scenic values, would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to about 20 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 323 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								51,436
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	15,219	15,219	15,219	15,219	15,219		15,219	
Semi-remote Recreation								
Recommended LUD II						51,436		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	197	197	197	197	197		197	
Timber production	36,021	36,021	36,021	36,021	36,021		36,021	
TOTAL	**51,436**	**51,436**	**51,436**	**51,436**	**51,436**	**51,436**	**51,436**	**51,436**
Suitable Timber Lands	2,243	2,243	2,243	2,243	2,243	0	2,243	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Freshwater Bay (325)

ACRES (NFS): 47,070

BIOGEOGRAPHIC PROVINCE: East Chichagof Island

ECOLOGICAL SECTION: Northeast Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 17

I. Overview and Description

(1) Location and Access: The Freshwater Bay Roadless Area is located on the northeast corner of Chichagof Island, along the north shore of Freshwater Bay. To the northwest are Huna Totem Corporation and Sealaska Corporation lands. The eastern portion of the roadless area is bordered by Chatham Strait. The Hoonah/False Bay road system lies to the northeast. The roadless area is 10 air miles southeast of Hoonah. The town of Hoonah has regular charter plane service and is on the Alaska Marine Highway route. The roadless area can be accessed via roads that nearly encircle the area, extending well into the roadless area in many places. It can also be accessed from saltwater along Freshwater Bay and Iyoukeen Cove by boats and charter flights. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: At the time of Euroamerican contact, the Hoonah and Angoon Tlingit were using this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located in the area. The forest archaeologists have identified cache pits, a bear shell midden, a smokehouse/cabin, native burial sites, and petroglyphs in the area.

Some of the most recent historical activities taking place in this roadless area include the Gypsum Camel mining operation. In the early 1900's, there was a gypsum mining operation in Gypsum Creek. The stone was moved one mile to Iyoukeen Cove by rail. A trestle was built over the water for 2,000 feet to access the ships for loading.

(3) Geography and Topography: This area is quite mountainous with large, deep stream drainages. The terrain ranges from sea level to more than 3,400 feet in the far western corner of the roadless area. Several peaks north of Seal Creek reach 3,000 feet or higher. There are some flat areas at the head of Freshwater Bay. The area contains 18 miles of shoreline on saltwater. There are four islets totaling approximately an acre in the roadless area. A large part of the area is alpine (6,778 acres), and rock (2,950 acres).

(4) Ecosystem:

(a) Classification: Biogeographic Province. The roadless area is classified in the East Chichagof Island Biogeographic Province. This province has a dryer and colder climate than the outer coast of Chichagof Island and the winter snow pack is generally greater. Chichagof Island is deeply dissected into three peninsulas that may be functioning biologically more like separate islands. Vegetation in this province represents a modal similar to Admiralty Island Province.

Ecological Section/Subsection. The Freshwater Bay Roadless Area is contained entirely within the Northeast Chichagof Fjordlands Ecological Section (M247C). This area is represented by one ecological subsection (see table below). The Freshwater Bay Carbonates Ecological Subsection has a bedrock mixture of carbonate and noncalcareous sedimentary rocks with bits of volcanic and intrusive igneous rocks. Many formations of almost pure carbonate form impressive mountains and ridges with extensive areas of exposed rocks containing pits and sinkholes. Atop the mountains, alpine vegetative communities thrive. The mid to lower elevations of the moderately sloped mountains have well drained soils that support productive

hemlock spruce forests. In the valleys where glacial tills and glaciomarine sediments exist, non-forested wetlands are present. Where streams flow through calcareous colluvium, rich calcareous fens develop at the stream base creating a diverse and rare plant community (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Northeast Chichagof Fjordlands	Freshwater Bay Carbonates	100%

(b) Soils: In the Freshwater Bay Roadless Area, shallow soils with good drainage develop on steeper slopes due to rapid loss of material by erosion and efficient rainwater runoff. This is apparent on the steep slopes that face Freshwater Bay. Deep, well-drained soils occur on gentler slopes below steeper areas where transported soil materials have collected.

The poorly drained soils in this area are associated with low relief and impermeable subsurface layers. In locations with poor drainage, deep organic soils (muskegs) tend to form. Drainage improves with increased slope gradient; however, as slopes become oversteepened, soil depths become much shallower. Alpine soils are found above 2,000 feet.

(c) Vegetation: Western hemlock-Sitka spruce forests dominate the overstory of the roadless area. The understory is composed of shrub such as red huckleberry, rusty menziesia, and devil's club. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Muskegs, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low elevation timber stands where drainage is restricted. Trees are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar. Approximately 666 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Plant communities are characterized by low shrubs, grasses, and sedges at elevations above 2,000 feet. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra. Approximately 6,778 acres of alpine are mapped in the area.

There are approximately 26,325 acres mapped as forest land of which 18,612 acres or 71 percent are mapped as productive old-growth forest. Of the productive old growth, 6,125 acres or 33 percent are mapped as high-volume old-growth forest. The productive old growth includes about 821 acres of high-volume, coarse-canopy old growth. There are also 85 acres of second growth resulting from beach logging in 1960.

(d) Fish Resources: Streams in the area provide spawning and rearing habitat for pink, chum, and coho salmon. Other species that may be present include cutthroat and steelhead trout, Dolly Varden char, stickleback and smelt. Wukuklook and Gypsum Creeks are major anadromous streams. There are many headwater tributaries for the large fish-producing streams located within roaded areas; these include the North Fork of Freshwater Creek, Seal Creek, and Iyoukeen Creek.

(e) Wildlife Resources: Sitka black-tailed deer and brown bear inhabit this roadless area. The roadless area has high quality deer and bear habitat, as well as Vancouver Canada geese use. There are bald eagle nesting and roosting trees in this area. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island.

(5) Management Direction and Current Uses: The roadless area was allocated to two Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These two LUDs are Timber Production and Old-growth Habitat.

LUD	Acres
Timber Production	24,406
Old-growth Habitat	22,664

Approximately 52 percent of the roadless area was allocated to a development LUD, Timber Production. Approximately 48 percent of the roadless area was allocated to a non-development LUD, Old-growth Habitat.

There is an identified anchorage in False Bay, providing access to the roadless area. There are eight recreation places. Recreation activities include viewing of wildlife/fish, beachcombing, saltwater shore fishing, stream fishing, hiking, dispersed camping, big game hunting, waterfowl hunting, small game hunting, upland bird hunting, viewing scenery, cross-country skiing, and saltwater kayaking. The Suntaheen River contains a fish ladder improvement.

There is a patented gypsum mine on the edge of the roadless area (approximately 100 acres). A special use permit for a shelter has been issued at Iyoukeen Cove. There were no outfitter/guides issued for the area in 1999; however, 10 were issued for the Freshwater Bay (147 service days) and 3 for False Bay (11 service days) in 2000. The area receives some subsistence use, mostly from residents of Tenakee Springs, Freshwater Bay, and Hoonah. VCU 204 is listed among the VCUs with the highest community fish and wildlife values.

(6) Appearance (Apparent Naturalness): Other than the gypsum mining operations area, the remaining roadless area has not been modified and appears natural. However, there are roads and timber harvest directly adjacent to the boundary on nearly all sides. These roads and harvest units penetrate deeply into the roadless area at several points. This results in a less than natural appearance when viewed from key viewpoints and travel routes (Chatham Straight, Freshwater Bay, and the Hoonah road system).

(7) Surroundings (External Influences): Huna Totem and Sealaska lands lie to the northwest. These lands have been extensively roaded and logged. The Gartina Creek drainage is the municipal watershed for Hoonah; part of the watershed is within the roadless area. The northeast corner of the roadless area borders a roaded area that was logged in the early 1980's. These roads extend southeast to Flints Point on Chatham Straight. The Point Augusta Roadless Area is located northeast of the roaded area. A former log transfer facility (LTF) was located in False Bay, to the east of the Freshwater Bay roadless area. Chatham Strait lies to the east and Freshwater Bay lies to the south. Developed areas extend along much of the shore. Seal Creek, south of the roadless area, also has a former LTF and a road system. Patented gypsum mines are adjacent to the roadless area.

The closed Kennel Creek logging camp and Pavlof/East Point Roadless Area are on the south side of Freshwater Bay. There is a log transfer facility (LTF) at the closed Kennel Creek camp, which is across the bay from the roadless area. The road systems to the northeast and southwest of the roadless area connect the area to Hoonah. The southwestern road system is also connected to the Kennel Creek road system. The ferry route to Hoonah passes the southeast corner of the roadless area.

(8) Attractions and Features of Special Interest: The Iyoukeen Peninsula is of special interest. The peninsula is approximately 4 miles long and 1/8 of a mile wide. There is no undergrowth and walking the length is like being in a park.

The natural features of the area, the scenery, and the opportunity to see wildlife are all attractions. High quality fishing opportunities in the streams and lakes also provide attractions. The area contains nine inventoried recreation places, which cover 409 acres, or 1 percent of the roadless area. There are no public recreation cabins in the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: There has been extensive roading and harvesting along the edges and within the 1989 boundaries of the roadless area. The result is a smaller, irregular, partially fragmented roadless area compared to that which existed in 1989. Several smaller areas along the boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the roadless area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The roadless area has had little modification by humans. The overall appearance is natural except for some evidences in the forest and near the water of the gypsum mining operation from the early 1900's. Although the land within the roadless area boundary is unmodified, this area is surrounded by roading and timber harvest activity. Several of the roading and timber activities penetrate deeply into the area, leaving the area with a moderate natural integrity and apparent naturalness, and decreasing the suitability of the land for classification as wilderness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There are moderate to high opportunities for solitude and primitive recreation in the roadless area because of its relatively large size; however, most of the area is within a mile of a road and a visitor may be disturbed by traffic or logging noise. There is some chance of meeting other recreation groups in this area because of the proximity to Hoonah and Tenakee Springs, and the use this area is receiving now.

The steep nature of the landforms and the presence of brown bears present a moderate degree of challenge and the need for woods skills and experience.

The area provides primarily Primitive and Semi-primitive Non-motorized recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	39,853	85%
Semi-Primitive Motorized (SPM)	1,492	3%
Roaded Natural (RN)	5,720	12%

The area contains nine inventoried recreation places, which cover 409 acres, or less than 1 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	0	0
SPM	3	271
RM	7	138

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are no developed recreation facilities in the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Freshwater Bay Roadless Area Roadless Area was 24 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 17. The change in rating is reflective of the degree of developments that have occurred on adjacent lands and the effects this has had on wilderness attributes of the area.

(4) Ecologic and Geologic Values: The roadless area is irregular and fragmented by a road and timber harvest areas. It is not connected to any other roadless areas or wilderness. It has no known unique ecologic or geologic values.

(a) Fish Resources: The 1998 ADF&G Tongass Fish and Wildlife Resource Assessment lists three VCUs as primary sportfish producers. These VCUs, Game Creek (204), Gartina Creek (205), and Spasski Creek (207), are partially in the roadless area and adjacent to the town of Hoonah. No VCUs were listed as primary salmon producers (ADF&G, 1998).

Streams in the area provide spawning and rearing habitat for pink, chum, and coho salmon. Other species that may be present include cutthroat trout, steelhead trout, Dolly Varden char, stickleback, and smelt. Wukuklook and Gypsum Creeks are major anadromous streams. There are many headwater tributaries for the large fish producing streams located within roaded areas; these include the North Fork of Freshwater Creek, Seal Creek, and Iyoukeen Creek. The Anadromous Stream Catalogue (ADF&G, 2000) also identifies Spasski Creek and Gartina Creek as major fish-bearing streams with headwaters in this roadless area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicates that average annual peak escapement of pink salmon is 13,200 and 7,400 for Gartina Creek and Spasski Creek, respectively.

(b) Wildlife Resources: Sitka black-tailed deer and brown bear inhabit this roadless area. Most of the shorelines and some of the drainages are considered critical deer winter range. Hippoback Ridge is considered good deer habitat. This area has high quality bear habitat, as well as Vancouver Canada geese use. VCU 207 was in the top 25 percent of VCUs for brown bear harvest between 1985 and 1994 and VCU 215 was in the second 25 percent (ADF&G, 1998). Both of these VCUs are in the center of the roadless area. There are bald eagle nesting and roosting trees in this area. MacDonald and Cook (1999) do not list black bears or mountain goats as inhabiting Chichagof Island.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Hoonah Ranger District.

(d) Karst, Cave, and Other Geologic Resources: A portion of this area is underlain by limestone or marble, and karst and cave resources are known to have developed there. Only limited inventory has occurred in this area so the extent of karst and cave development is not fully understood. The limestones and marbles found here are commonly the ridge-forming rock types. Extensive karst systems are known from the intensity and numbers of features identified during limited inventory and air photo interpretations. Paleontological discoveries are likely, and so are archaeological finds. Because of the thickness of the limestone and marble in this area, vertical pits and cave systems of record depth are possible. Extensive areas of limestone and marble are exposed from sea level to the ridge tops in these glaciated valleys. The karst systems found here extend from the alpine or higher elevations to the sea, providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. This represents 18,745 acres, or 40 percent of the roadless area. Two-thirds of the karst acres are classified as high vulnerability karst. There are no glaciers in this area. The Sonyakay Ridge, a very prominent ridge system, is a geological form of special interest.

(5) Scientific and Educational Values: Sonyakay Ridge is of special geological interest. Sonyakay Ridge is a very prominent ridge system, between Iyouktug and Wukuklook Creeks. The land form is very steep and very rugged. The peaks vary in height from 2,200 to 2,500 feet along this ridgeline. The abandoned gypsum mine on Gypsum Creek is a special feature of historical interest. These features can be studied relatively easily due to their proximity to the Hoonah roads system.

(6) Scenic Values: The visual character type of this area is Admiralty-Chichagof. The landforms in this area are generally rounded with mountain elevations that vary from 2,055 to 3,395 feet. The Freshwater Bay Roadless Area has rocky shorelines interspersed, with small gravel beaches. Streams are generally larger and longer in this character type than on other islands of Southeast Alaska. Saltwater bays and estuaries are present and exhibit much variety. Several tidal meadows of varying sizes are found in this unit. Lower slopes are densely forested, but exhibit a combination of muskeg openings, brush, and scattered tree cover up to approximately 2,500 feet elevation. Upper slopes and summits appear barren from a distance, but offer a variety of alpine vegetation as well as numerous rock outcroppings.

The area has a natural appearance when viewed from Chatham Strait, Freshwater Bay, False Bay, and Iyoukeen Cove because the topography and trees lining the coast screen the timber harvest activities and roads adjacent to this area. The north face of Sonyakay Ridge appears unmodified. Visual Priority Routes and Use Areas identified by the Forest Plan within or adjacent to the area include: Freshwater Bay, a small boat route and saltwater use area; Chatham Strait, a part of the Alaska Marine Highway system and a small boat route; Iyoukeen Cove and False Bay, saltwater use areas; Sonyakay Ridge, a dispersed recreation area; the Suntaheen Fish Viewing Area; and the community of Hoonah.

The evaluation area was inventoried as 46 percent of the acreage in a Variety Class A (possessing landscape diversity that is unique for the character type), 37 percent was in Variety Class B (possessing landscape diversity that is common for the character type), and 14 percent of this roadless area was in Variety Class C (possessing a low degree of landscape diversity). Approximately 3 percent of the area was not inventoried for Variety Class Type.

The majority (approximately 62 percent) of this roadless area is in Existing Visual Condition (EVC) I; these areas appear to be untouched by human activity. Approximately 3 percent is in an EVC IV, which are areas in which changes in the landscape are easily noticed by the average person and may attract some attention. There appears to be disturbances but they resemble natural patterns. Approximately 32 percent, is in EVC V where changes in the landscape are obvious to the average person. The changes appear to be major disturbances. Approximately 3 percent of the area was not inventoried for EVC.

(7) Social, Cultural, and Historical Values: At the time of Euroamerican contact, the Hoonah and Angoon Tlingit were using this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located in the area. The forest archaeologists have identified cache pits, a bear shell midden, a smokehouse/cabin, Alaska Native burial sites, and petroglyphs in the area. Some of the most recent historical activities taking place in this roadless area include the Gypsum Camel mining operation. In the early 1900's, there was a gypsum mining operation in Gypsum Creek. The stone was moved one mile to Iyoukeen Cove by rail. A trestle was built over the water for 2,000 feet to access the ships for loading.

Extensive timber harvest has occurred near the boundaries of the roadless area. Logging is an important component of the local economy. Recreation activities include viewing of wildlife/fish, beachcombing, saltwater shore fishing, stream fishing, hiking, dispersed camping, big game hunting, waterfowl hunting, small game hunting, upland bird hunting, viewing scenery, cross-country skiing, and saltwater kayaking. There is a block of mining claims in the roadless area. A special use permit for a shelter has been issued at Iyoukeen Cove. There were no outfitter/guides issued for the area in 1999; however, 10 were issued for the Freshwater Bay (147 service days) and 3 for False Bay (11 service days). The area receives some subsistence use, mostly from residents of Tenakee Springs, Freshwater Bay, and Hoonah. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified 8 of the 10 VCUs partially or wholly located within the area as subsistence use areas with the highest sensitivity to disturbance. The remaining two VCUs were identified as subsistence use areas with a moderate to high sensitivity to disturbance. Two of the VCUs, 204 and 215, are listed among the VCUs with the highest community fish and wildlife values (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The roadless area lies along the north shore of Freshwater Bay. Iyoukeen Cove and Chatham Strait lie to the east. To the northwest are Huna Totem Corporation and Sealaska Corporation lands. Both areas have been extensively harvested. The eastern portion of the roadless area is bordered by The Hoonah/False Bay road system, which lies to the northeast. The Hoonah road system and harvest units continue to the east and combine with the False Bay road system and units in the southeast

corner of the area. On the southwestern corner of this roadless area are the Kennel Creek road system and harvest units. The Admiralty Island National Monument-Kootznoowoo Wilderness lies to the east, across the Chatham Straight.

The boundaries are not well defined, except where the roadless area borders the shore. The lands that lay next to private lands and National Forest System lands managed for timber production would be difficult to manage for wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Cruise ships travel through Chatham Straight enroute to Glacier Bay. Many people fly into the area for sport fishing. There is the potential for some of these tourists to be drawn to fish, hunt, and camp in the roadless area. There is a potential for outfitter/guide permits to increase. Public recreation cabins could be built in Freshwater Bay or Iyoukeen Cove. In the original Tongass Land Management Plan (1979), there was a proposal for alpine trails near the head of Freshwater Bay, on to the ridge system of Elephant Mountain and Sonyakay Ridge. There were also alpine shelters planned for the Sonyakay Ridge area.

In 1996, the Alaska Visitors Association proposed hut-to-hut hiking/ kayaking/ canoeing for 25 persons and a leased proprietary camp for 15 persons as recreation development for the Iyoukeen Peninsula.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resources: TLMP identifies fish passage projects for Freshwater and Suntaheen Creeks.

(4) Wildlife Resources: There are no wildlife enhancement projects currently planned in the roadless area.

(5) Timber Resources: There are 18,612 acres inventoried as productive old-growth forest in the roadless area. In addition, 85 acres of second growth have resulted from beach logging activities. Of these acres, 10,237 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,928 acres or 4 percent of this roadless area are estimated to be suitable for timber production. Approximately 592 of the suitable acres are mapped as high-volume old growth; of these acres, 88 are mapped as high-volume, coarse-canopy old growth. The potential for managing timber within the roadless area is very high. The existing road systems and LTF sites, as well as the proximity to Hoonah, make the management for timber harvest more economical.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present; there are no know epidemic disease occurrences.

(7) Minerals: The area was identified as having a moderate potential for mineral development in 1984. There are 22,737 acres identified with undiscovered mineral potential, although they are classified as low relative value. The USGS Mineral Resources Data website (USGS, 2001) indicates that there is an explored prospect claim for gold in the Gypsum Creek area. The private parcel of land along the edge of the roadless area near Gypsum Creek is a patented mineral claim.

(8) Transportation and Utilities: There are no transportation or utility corridors proposed for the roadless area. The Potential Transportation or Utility Corridor LUD overlay is located just north of this roadless area.

(9) Water Availability and Use: Although a special permit has been issued for a shelter in this roadless area, no other shelters or recreation cabins exist to create water demand. There are no hydroelectric or domestic water projects planned in the area.

(10) Areas of Scientific Interest: There are extensive karst resources in this roadless area. The mapped karst resources encompass approximately 18,745 acres or 40 percent of the roadless area. There is high vulnerability karst near the mountains and headwaters around Seal Creek and Sonyakay Ridge. The mountains around Gypsum

Creek also contain high vulnerability karst, but in the lower elevations and on Iyoukeen Peninsula, the karst is classified as low vulnerability. The Sonyakay Ridge, a very prominent ridge system, is a geological form of special interest.

(11) Land Use Authorizations: The current special use permit for the shelter at Iyoukeen Cove will continue. The potential for more outfitters and guides using the area more frequently is probable.

(12) Land Status: Most of the northern part of this roadless area is adjacent to land owned by Native Corporations and is encumbered.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Local issues include the continuing harvesting and roading of the timber lands, the effects on fisheries and wildlife habitat caused by logging, maintaining the visual high interest areas, maintaining lifestyles, location of log transfer facilities, the distribution of harvest volume classes and the tradeoffs between environmental protection measures, and the economics of the harvest activities. Subsistence use in the area is considered a priority among the local residents.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Freshwater Bay Roadless Area. In 2001, HR 2908 proposed that the roadless area be managed in an unroaded condition.

(c) Public Input During Forest Plan Revisions and Appeals: The Alaska Forest Association and other industry commenters were opposed to any additional wilderness. Others recommended that remaining roadless areas should be managed for primitive recreation of old-growth habitat and protected from logging and road building. A letter from Angoon with 48 signatures recommended that areas along the Chatham Strait be protected as subsistence areas. There should not be any logging, road building, or mining. In 1996, the Alaska Visitors Association proposed hut-to-hut hiking/ kayaking/ canoeing for 25 persons and a leased proprietary camp for 15 persons as recreation development for the Iyoukeen Peninsula.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: To be completed during the Final SEIS.

(f) Public Input Expressed During Supplemental EIS Process: ADF&G noted that this roadless area is "ecologically roaded" from a brown bear perspective because virtually all brown bear home ranges in this area intersect roads (based on extensive brown bear radiotelemetry).

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 325 for permanent protection as LUD II. SEACC recommended Roadless Areas 317, 318, 319, 321, 323, and 325 for LUD II protection. It is more critical now than ever before that these remaining wild areas on Chichagof are protected.

A number of cave/karst experts and other individuals stated that East Chichagof and the North Central Prince of Wales Biogeographic Provinces contain some of the most highly developed karst lands in the Tongass. It was noted that protection of a combination of Freshwater Bay (#325), Game Creek (#323), Tenakee Ridge (#321), and Pavlov/East Point (#319) Roadless Areas would create a truly world class karst

reserve for the East Chichagof Biogeographic Province. These areas include massive limestone from ridge-top to shoreline, including Freshwater Bay's Sonyakay Ridge and the unique Iyoukeen Peninsula karst, along with significant remnants of representative high-volume old growth. Freshwater Bay and Game Creek are the two most critical components of this province because of their size and amount of remaining forested karst.

The president of the Hoonah Indian Association asked for the protection, conservation, and responsible management of this roadless area because of its special interest to the Huna People.

(2) Nearby Roadless and Wilderness Areas and Uses: To the north and northeast are the Whitestone (#318) and Point Augusta (#317) roadless evaluation areas. Directly to the south, across Freshwater Bay, is the Pavlof/East Point (#323) Roadless Area. The Game Creek (#323) Roadless Area is located to the west, across the Hoonah-Kennel Creek road system. All of these areas are separated from the Freshwater Bay Roadless Area by developed areas. The Admiralty Island National Monument-Kootznoowoo Wilderness is located to the east, across Chatham Strait. These areas receive low to moderate recreation and subsistence use.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	30	60
Sitka (Pop. 8,835)	55	95
Hoonah (Pop. 860)	10	25
Angoon (Pop. 572)	30	30

The nearest towns to Freshwater Bay Roadless Area that are served by the Alaska Marine Highway system are Tenakee Springs, Hoonah, and Angoon. The closest commercial airline service is at Sitka and Juneau.

(4) Relative Contribution to the National Wilderness Preservation System: The Freshwater Bay Roadless Area is located on the northeast corner of Chichagof Island, along the north shore of Freshwater Bay. This area is quite mountainous with large, deep stream drainages. The terrain ranges from sea level to more than 3,400 feet in the far western corner of the roadless area. Several peaks north of Seal Creek reach 3,000 feet or higher. The area contains 18 miles of shoreline on saltwater and four islets in Freshwater Bay.

Overall, the Freshwater Bay Roadless Area has moderate natural integrity and apparent naturalness. Exceptions are the developed areas along the boundaries that nearly divide the roadless area into three segments. Development in these areas disrupts the natural appearance of the landscape. There is a moderate opportunity for solitude and a relatively high opportunity for primitive recreation within the roadless area.

The roadless area has a relatively high scenic quality; 46 percent of the area was inventoried as distinctive for the character type from a visual perspective. The Iyoukeen Peninsula is of special interest. The peninsula is approximately 4 miles long and one-eighth of a mile wide. There is no undergrowth and walking the length is like walking through a park.

The roadless area includes about 6,125 acres of high-volume, old-growth forest. Of these acres, approximately 821 are mapped as high-volume, coarse-canopy old growth.

The roadless area is classified as being in the East Chichagof Island Biogeographic Province and makes up about 4 percent of the province. It is one of 12 inventoried roadless areas found in the province that collectively make up about 72 percent of the province. Approximately 79 percent of the province is unroaded. The province contains the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness, which make up 6 percent of the province. The province also includes all or portions of three LUD II areas, which make up approximately 25 percent of the province.

The Freshwater Bay Roadless Area lies completely within the Northeast Chichagof Fjordlands Ecological Section. This portion represents 10 percent of the entire ecological section, which is well represented in non-development LUDs (26 percent) and a small portion (7 percent) is within LUD II.

This roadless area is entirely within the Freshwater Bay Carbonates Ecological Subsection; this portion of the roadless area represents 18 percent of the entire ecological subsection, which is well represented in non-development LUDs (28 percent), but not represented in wilderness or LUD II areas.

The Freshwater Bay Roadless Area was rated at 17 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, it is ranked 93rd from the highest (along with four other roadless areas) out of the 109 Tongass inventoried roadless areas.

There is national and some local support for managing the area in a roadless condition but there is little support for designating the area as a wilderness. The WARS score for the area is low relative to other areas of Southeast Alaska, and the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness are in the biogeographic province. Designation of the area would add Congressional protection to about 18 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection. The roadless area is relatively small and fragmented and it is adjacent to roaded and harvested areas. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. These factors indicate that the relative contribution to the National Wilderness System would be low to moderate.

V. Environmental Consequences

The Freshwater Bay Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 48 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 52 percent of the roadless area. The land in the development LUDs provides an estimated 1,928 acres that are suitable for timber production (11 percent of the suitable acres on the Hoonah Ranger District). Approximately 88 acres of those suitable lands are classified as high-volume, coarse-canopy old growth. There are approximately 22,737 acres identified with undiscovered low mineral potential, where prospecting could occur. The values associated with the natural settings of the roadless area could be affected by the ongoing developments allowed by the Forest Plan. Much of the high scenic value of the area is protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and development and recreation developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including old growth and scenic values, would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to about 18 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber sale projects would not be allowed, and the potential for other development, including recreation, mineral, and hydroelectric, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including old growth and scenic values, would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to about 18 percent of the Freshwater Bay Carbonates Ecological Subsection, which currently contains no areas under Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 325 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								47,070
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	22,664	22,664	22,664	22,664	22,664		22,664	
Semi-remote Recreation								
Recommended LUD II						47,070		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production	24,406	24,406	24,406	24,406	24,406		24,406	
TOTAL	**47,070**	**47,070**	**47,070**	**47,070**	**47,070**	**47,070**	**47,070**	**47,070**
Suitable Timber Lands	1,928	1,928	1,928	1,928	1,928	**0**	1,928	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: North Kruzof (326)

ACRES (NFS): 25,373

BIOGEOGRAPHIC PROVINCE: West Baranof Island

ECOLOGICAL SECTION: Baranof-Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 22

I. Overview and Description

(1) Location and Access: The area is located on the north end of Kruzof Island and includes Partofshikof Island, which is located immediately east of the area, as well as a number of smaller offshore islands and rocks. The area is generally bordered to the north by Salisbury Sound, to the west by the open Pacific Ocean, and to the south by developed areas that extend the width of the island from Gilmer Bay to Krestof Sound. Non-National Forest System lands border the area to the northwest. Neva Strait borders the area to the east. Sukoi Inlet separates the Kruzof Island portion of the area from Partofshikof Island.

Juneau is approximately 85 air miles northeast and Sitka is approximately 15 air miles southeast of the area. They are both serviced by the Alaska Marine Highway and have air service. The primary form of access to the area is by boat and sea plane on saltwater along all coastlines. Access to the area is generally good due to the numerous bays and fiords that provide sheltered anchorage for boats. There are no trails or public recreation cabins in the area. The 2.5-mile-long Sealion Cove Trail extends from Kalinin Bay to Sealion Cove through the area of non-National Forest System lands that borders the area to the northwest. This trail provides access to the edge of the area. This is also the case with the forest road that borders the Kruzof Island portion of the area to the south. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Use of the area has been primarily for hunting, fishing, recreation, and temporary occupancy. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found. Goldschmidt and Haas (1946) identified a former smokehouse/cabin in this area.

(3) Geography and Topography: The area is generally characterized by small irregular mountains or ridges 1,000 to 2,000 feet in elevation with steep slopes. Numerous rocky crests and sharp ridges are found scattered throughout the area. The coastline is scalloped with bays and coves, and encompasses Sukoi Strait between Kruzof Island and Partofshikof Island. The shoreline is characterized by forested lowlands with a relatively gentle slope. Rocky islands, reefs, and rock bluffs dominate the coast along the north and west sides of the area. The rocky shoreline is interspersed with small gravel or sandy beaches. Partofshikof Island is characterized by two small mountains rising over 1,000 feet in elevation.

Streams are generally short and flow directly to saltwater. A dominant feature of the area is the rugged ridge that runs the width of Kruzof Island along the southern boundary of the area. With an elevation of 2,000 feet, it effectively separates the north portion of this roadless area from the rest of Kruzof Island.

This area includes 765 acres of alpine, 533 acres of rock, and no mapped ice or snow features. There are 98 miles of saltwater coastline and 8,543 acres of islands including Partofshikof Island.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the West Baranof Island Biogeographic Province. Topographically, Baranof Island is the most rugged of all the islands in Southeast Alaska. The outer coast of this province is dotted with hundreds of small islands. All forest plant associations except those in the Western redcedar series and those found around large mainland rivers occur in this province.

Ecological Section/Subsection. The North Kruzof Roadless Area is contained entirely within the Baranof-Chichagof Fjordlands Ecological Section (M247B). This area is represented by one ecological subsection (see table below). The Sitka Sound Ecological Subsection is mostly covered in a blanket of ancient volcanic ash approximately 2 – 6 feet deep. Where the ash has been washed away, Sitka graywacke, granite, and low-grade metamorphic rocks are exposed. The Sitka Sound Complex Ecological Subsection is considerably lower in elevation relative to the surrounding subsections and there are no glaciers, although there are some permanent snowfields. Mixed conifer and hemlock-spruce forests dominate the lower elevations and shorelines, and forested wetlands of lodgepole pine and mixed conifer are abundant (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Baranof-Chichagof Fjordlands	Sitka Sound Complex	100%

(b) Soils: Shallow mineral soils with good drainage can be found on steeper slopes due to rapid loss of material by erosion and efficient rainwater runoff. Deep, well drained soils commonly occur below the shallow soils on the gentler slopes where transported soil materials have collected. Poorly drained soils are found associated with low relief and impermeable subsurface layers. In locations with poor drainage, deep organic soils (muskegs) tend to form. In riparian areas, soil zones tend to contain sand and gravels as a result of flood deposition.

(c) Vegetation: The proximity of this area to the open North Pacific Ocean and the unimpeded movement of storms into the area from the southwest result in a high rainfall. Conifer cover density varies widely even on low slopes near saltwater, and is usually interspersed with muskeg and other lower forms of vegetation. Larger intertidal grass and associated meadows species are infrequent. The effects of wind and salt spray affect the character and, to some extent, the species on the west side of the area.

The vegetation of this roadless area consists primarily of typical spruce-hemlock forests. Western hemlock-Sitka spruce dominate the overstory while the understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Muskegs are abundant within this area. The mapped acreage for muskegs is 1,346 acres; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. These areas, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low elevation timber stands where drainage is restricted. Trees within the muskegs are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska cedar.

Small tide flats are found at the heads of Kalinin Bay and Sinitsin Cove, and are associated with stream estuaries. The tideflats generally support sea milkwort, glasswort, and algae. Beach meadows occur between the shore and the forest. Lower beach meadows are composed of belch ryegrass, reed bent grass, hairgrass, fescue grass, beach lovage, goose tongue, and sedges. Upper beach meadow plants include yarrow, bedstraw, starwort, ferns, western columbine, and coca parsnip. Oregon crabapple, alder, devil's club, and blueberry occur along the border of the beach meadow and the forest.

There are approximately 21,560 acres mapped as forest land, of which 12,519 acres or 58 percent are mapped as productive old-growth forest. Of the productive old growth, 4,673 acres or 37 percent are mapped as high-volume old-growth forest. The productive old growth includes about 371 acres of high-volume, coarse-canopy old growth. There are 117 acres of second growth forest where beach harvest has occurred in the past.

(d) Fish Resources: The Anadromous Waters Catalogue and Atlas (ADF&G, 2000) shows eight unnamed fish-bearing streams in this roadless area, all but one on Kruzof Island. These streams drain into Kalinin Bay, Sinitsin Cove, Sukoi Inlet, and Sealion Cove. Most of these streams provide habitat for coho, pink, and chum salmon and Dolly Varden char. The stream draining into Sealion Cove also provides habitat for sockeye salmon.

(e) Wildlife Resources: There are many varied wildlife resources in this roadless area. Bird and waterfowl rearing and nesting areas are abundant in this area. Generally, the area provides good habitat for deer, brown bear, and furbearers such as marten and mink. Bald eagle habitat, including nesting and roosting trees is found along the shorelines of this roadless area. MacDonald and Cook (1999) do not list black bear, wolves, moose, or mountain goats as inhabiting this area.

(5) Management Direction and Current Uses: This area was allocated to three different Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These three LUDs are Timber Production, Semi-Remote Recreation, and Old-growth Habitat.

LUD	Acres
Timber Production	7,348
Semi-Remote Recreation	9,786
Old-growth Habitat	8,239

Approximately 29 percent of this area was allocated to one development LUD, Timber Production. The Timber Production LUD is located in the south and west part of the roadless area on Kruzof Island.

The remaining 71 percent of this area was allocated to non-development LUDs (Semi-Remote Recreation and Old-growth Habitat). All of Partofshikof Island and the area along the west shore of Sukoi Inlet were allocated to the Semi-Remote Recreation LUD, which accounts for approximately 39 percent of the roadless area. The small islands in the vicinity of the area are also allocated to the Semi-Remote Recreation LUD. Approximately 32 percent of the Kruzof Roadless Area was allocated to the Old-growth Habitat LUD. This LUD is located in the northern half of the roadless area on Kruzof Island.

There are a number of authorized special uses existing within the area. Sitka Sound Seafoods has a special use permit for use of facilities at Kalinin Bay in support of temporary fish buying scow. The Federal Aviation Agency has an interagency agreement for use of facilities on top of the ridge in the southern portion of the area as a radio site for air to ground communications between pilots of general aviation aircraft and personnel in Flight Service Stations. A Forest Service radio repeater site is located on the same ridge and is used for intra-agency radio communications. A shelter is located on the Neva Strait side of Partofshikof Island.

Recreational use of the area is primarily for hunting and fishing, and enjoying the scenery. This use is scattered across the area, with the usual concentrations near lakes, streams, and shorelines. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified the six VCUs wholly or partially located within the area as subsistence use areas with a high sensitivity to disturbance.

(6) Appearance (Apparent Naturalness): A vast majority of the area is considered unmodified, except for those areas (primarily located near the shoreline) with evidence of current or historic use. Some older beach logging has occurred in patches along the shorelines east and west of Sukoi Inlet. This roadless area appears to be unmodified from major travel routes and popular use areas.

(7) Surroundings (External Influences): The Kruzof Island portion of the area is bordered by saltwater on three sides. As a result, external influences on those sides are limited to the sights and sounds of motorized boats.

The area is bordered to the northwest by the Sealion Cove Trail, which extends from Kalinin Bay to Sealion Cove through an area of non-National Forest System lands. An area developed in support of timber management forms the southern boundary of this roadless area. This development has only local effects on the roadless area because it is screened from the majority of the area by a ridge of mountains that extend along the south end of the roadless area. The Partofshikof Island portion of the area is entirely surrounded by saltwater, with external effects mainly limited to those associated with motorized boats. Alaska Marine Highway system ferries and other ships, boats, and floatplanes can be observed or heard along Neva Strait, which is a major water transportation corridor. The sight and sound of airplanes overhead also exerts an external influence on the area.

(8) Attractions and Features of Special Interest: The area contains 11 inventoried recreation places, which cover 25,271 acres, or almost 100 percent of the roadless area. The natural features of the area, the scenery, and the opportunity to see wildlife are all considered attractions. High quality fishing opportunities in the streams and lakes also provide attractions. There are no National Forest System trails. There is a public recreation shelter on Partofshikof Island in this roadless area.

(9) Differences Between the 1989 and 2003 Roadless Area Boundary: The boundary has primarily been changed by dropping the peninsula that contains Surprise Lake because of changes in land ownership and isolation of some National Forest System lands.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified except for the evidence of current and historic use of the area. Timber harvest has occurred in patches along the shorelines east and west of Sukoi Inlet. This activity, although locally evident, has a very low overall effect on the natural integrity and apparent naturalness of the area. Both the relative size of the developments and their location along the shoreline contribute to that low impact. The long-term ecological processes are intact and operating, with the effect of human influences on natural processes unmeasurable. The area's appearance is generally suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a relatively high opportunity for solitude and primitive recreation within the area. Both the size of the area and the screening offered by the topography and vegetation increase these opportunities. Recreational use of the area is relatively limited and dispersed, so that encounters with other visitors are unlikely. The sight or sound of airplanes overhead and boats along the coastlines can occasionally intrude on a visitor's solitude. Neva Strait, which borders Partofshikof Island to the east, is a major water transportation corridor. Alaska Marine Highway system ferries and other ships, boats, and floatplanes traveling this corridor can be observed or heard from locations on Partofshikof Island.

The area provides a moderate to high opportunity for primitive recreation as a result of its size, topographic and vegetative screening, diversity of primitive recreational opportunities, and physical challenges. This area has a highly irregular topography and diverse vegetation that combine to offer a setting capable of providing a variety of primitive recreation opportunities. Lakes, ponds, streams, bays, rugged mountains, and a varied coastline all contribute to these opportunities. The absence of developed recreational facilities further enhances the opportunity for primitive recreation.

Outfitter/guide use was reported at three locations in and around this area in 1999. These locations were Kalinin Bay, Sinitsin Cove, and Sukoi Inlet. Twelve groups with a total of 59 clients were reported visiting the area. Reported uses included camping, brown bear hunting, and hiking.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	19,398	76%
Semi-Primitive Motorized (SPM)	3,754	15%
Roaded Natural (RN)	1,412	6%
Roaded Modified (RM)	765	3%

The area contains 11 inventoried recreation places, which cover 25,271 acres, or almost 100 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	4	19,367
SPM	4	3,727
RN	3	1,412
RM	4	765

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are no National Forest System trails and one public recreation shelter in the area. The Sealion Cove Trail, which extends from Kalinin Bay to Sealion Cove, is located immediately northwest of the area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the North Kruzof Roadless Area was 21 out of 28 possible points. The rating was re-evaluated for this updated version of the Analysis of the Management Situation. Based on this re-evaluation, the area was given a rating of 22. This rating reflects the more consolidated area and the ability for the area to absorb effects of developments and activities nearby.

(4) Ecologic and Geologic Values: This area includes most of the north portion of Kruzof Island, as well as Partofshikof Island and a number of other smaller islands and rocks. It is not part of a larger unroaded land area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list any VCUs in this area as primary salmon or sportfish producers.

The Anadromous Waters Catalogue and Atlas (ADF&G, 2000) shows eight unnamed fish-bearing streams in this roadless area, all but one on Kruzof Island. These streams drain into Kalinin Bay, Sinitsin Cove, Sukoi Inlet, and Sealion Cove. Most of these streams provide habitat for coho, pink and chum salmon, and Dolly Varden char. The stream draining into Sealion Cove also provides habitat for sockeye salmon.

(b) Wildlife Resources: There are many varied wildlife resources in this roadless area. Bird and waterfowl rearing and nesting areas are abundant in this area. Generally, the area provides good habitat for deer, brown bear, and furbearers such as marten and mink. Bald eagle habitat, nesting and roosting trees, is found along the shorelines of this roadless area. MacDonald and Cook (1999) do not list black bear, wolves, moose, or mountain goats as inhabiting this area.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Peale's peregrine falcons pass through the forests during their spring and fall migration flights. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, 12 sensitive plant species are known or suspected to occur in the Sitka Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are no known glaciers or unique geologic features.

(5) Scientific and Educational Values: There are no known features of ecologic, geologic, scientific, or cultural significance in this area. There are no Research Natural Areas in this area. Sitka, located approximately 15 miles southeast of the area, is the closest community with school-age children.

(6) Scenic Values: The visual character type of this roadless area is classified as Admiralty-Chichagof. Landforms in this unit are generally rounded. Rocky islands, reefs, and rock bluffs are found frequently on the outer coast. Rocky shorelines interspersed with small gravel beaches are found throughout the character type. Streams are generally short and swift on the west side of the roadless area. The streams are clear and many offer considerable visual variety, e.g., pools, rapids, cascades, riffles, falls, and meandering forms. Saltwater bays and estuaries are numerous and exhibit much variety, from small sheltered coves to large exposed forms. Often dramatic high energy seas occur on the outer coast.
Evidence of historic use includes old fish cold storage facilities in Kalinin Bay, old cabins, and other historic occupancies. Current use includes the temporary fish buying scow, various short-term occupancies, and other evidence of use of the area and surrounding waters. Some beach logging has occurred in patches along the shorelines east and west of Sukoi Inlet. This activity is likely to be apparent to visitors that visit the specific sites. However, the roadless area generally appears to be unmodified from major travel routes and popular use areas.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: Neva Strait (Alaska Marine Highway); the west coast of Kruzof Island (tour ship route); Kalinin Bay, Sukoi Inlet, Neva Strait, Salisbury Sound, Southeast Kruzof Island, Gilmer Bay, and St. John Baptist Bay (small boat routes); Salisbury Sound and Point Amelia to Sealion Cove (saltwater use areas); Sealion Cove (#508) (hiking trail); Kalinin Bay (boat anchorage); and Sealion Cove (dispersed recreation area).

About 12 percent of the roadless area is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type). Approximately 16 percent of this roadless area is inventoried as Visual Variety Class B (possessing landscape diversity that is common for the character type), and approximately 72 percent as Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, approximately 85 percent, is inventoried in Existing Visual Condition (EVC) I, which are areas that appear to be untouched by human activity. About one percent of the area is in EVC III, where the average person may notice changes in the landscape, but they do not attract attention. Approximately 7 percent of the acreage is in EVC IV, which are areas where changes in the landscape are easily noticed by the average person and may attract some attention. There appear to be disturbances but they resemble natural patterns. Six percent of the area is in EVC V, where changes in the landscape are obvious to the average person and appear to be major disturbances.

(7) Social, Cultural, and Historical Values: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Use of the area has been primarily for hunting, fishing, recreation, and temporary occupancy. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found. Goldschmidt and Haas (1946) identified a former smokehouse/cabin in this area. The area is located approximately 15 miles northwest of Sitka.

There are no National Forest System trails and one public recreation shelter in the area. The Sealion Cove Trail, which extends from Kalinin Bay to Sealion Cove, is located immediately northwest of the area.

The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified the six VCUs wholly or partially located within the area as subsistence use areas with a high sensitivity to disturbance. Three of these six VCUs (302, 303, and 309) were included among the VCUs with highest community use values (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: With the exception of the northwest boundary, the North Kruzof Roadless Area is generally well defined by topographic features. The boundaries determined by Gilmer Bay, the Pacific Ocean, Salisbury Sound, Neva Strait, and Krestof Sound are easily described and recognized. Even the southern boundary, which is result of a road system and timber activity, roughly parallels one steeply sloped ridge of mountains over 2,000 feet in elevation and a second one over 1,500 feet. The northwest boundary is formed by an area of non-National Forest System lands. This boundary is a series of straight lines that do not follow natural topographic features. The feasibility of managing this area as wilderness or in an unroaded condition is generally good as there is no significant motorized access or other current nonconforming uses.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: The varied terrain, diverse vegetation, and attractive scenery of this area provide unlimited recreation potentials for dispersed recreation. Trails and cabins or shelters are possible.

In 1996, the Alaska Visitors Association (AVA) proposed a backcountry recreation lodge for Kalinin Bay and Sinitsin Bay, as well as recreation developments in the vicinity of Neva Strait and Salisbury Sound. The AVA also proposed the following developments for Gilmer Bay: hut-to-hut hiking for 12 persons/day, day boat docks with a 20 person capacity, flight seeing landings for 10 persons/day, day use recreation for 100 persons/day, and a day use wildlife observatory for 30 persons/day.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: No fish enhancement projects are planned for this roadless area.

(4) Wildlife Resources: No wildlife enhancement projects are planned for this roadless area.

(5) Timber Resources: There are 12,519 acres mapped as productive old growth in the roadless area. There are also 117 acres of second growth where timber harvest has occurred in the past. Of these acres, 7,769 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 489 acres or 2 percent of this roadless area are estimated to be as suitable for timber production. Approximately 151 of the suitable acres are mapped as high-volume old growth; of these acres, less than 10 are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area is dependent on higher market values and harvest methods that would allow roading.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present in the area. There are no known epidemic disease occurrences.

(7) Minerals: The area does not have a high mineral development potential. However, the USGS Mineral Resources Data website (USGS, 2001) shows an explored claim for copper and unexplored molybdenum resources in the Sealion Cove area. This area contains 17,510 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); all of these acres are considered to have low potential for development.

(8) Transportation and Utilities: There are no proposed transportation or utility corridors within or adjacent to this area. The area is bordered to the south by developed areas that could be extended into the roadless area where Forest Plan LUDs allow.

(9) Water Availability and Use: There is a developed recreation shelter that could create some water demand. There are no existing or planned hydroelectric or domestic water projects in the area.

(10) Areas of Scientific Interest: There are no known areas of scientific interest in the roadless area.

(11) Land Use Authorizations: There are authorizations for facilities associated with a fish buying station in Kalinin Bay and the Forest Service and the Federal Aviation Agency Radio sites in the southern portion of the area.

(12) Land Status: The area consists entirely of National Forest System lands, although there are non-National Forest System lands located adjacent to the northeastern part of the roadless area. Encumbered land within the roadless area is located in the southeastern part of Sinitsin Cove.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Most use of the area is associated with recreational boating, hunting, and fishing, and viewing wildlife and the scenery of the area.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Middle Kruzof Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also proposed that the drainage flowing into Gilmer Bay be protected as a Wild and Scenic River. The developed area that borders this roadless area to the south was identified for protection as a Restoration Area.

(c) Public Input During Forest Plan Revisions and Appeals: This area was specifically addressed in public input received during the Forest Plan revision and appeal. Commenters requested that Kruzof Island be managed for Semi-Primitive or Primitive recreation, or Old Growth. Kalinin Bay was identified as a high-use recreation area with a prime anchorage that deserves the "strongest protection possible." Kalinin Bay was also identified as an area deserving special protection by the Southeast Alaska Conservation Council (SEACC) in their comments on the 1991 and 1996 forest planning documents. About 100 letters generated in response to a SEAAC "alert" ("Tongass Action Alert: Your Voice Needed") identified Kalinin Bay and North Kruzof Island as areas deserving the "strongest protection possible."

Middle Kruzof Island was identified by another commenter as an area that should be managed for a local wood products industry. Comments were also provided for Management Area (MA) C44, which includes the North Kruzof Roadless Area. The Sierra Club Juneau Group requested that there be no further logging in MA C44 until its impact on "our resource of the future, tourism" is fully assessed. Timber industry commenters requested that the area be managed for timber production, emphasizing its importance to the Sitka economy.

The AVA proposed the following recreation developments for Gilmer Bay: hut-to-hut hiking for 12 persons/day, day boat docks with a 20-person capacity, flight-seeing landings for 10 persons/day, day-use recreation for 100 persons/day, and a day-use wildlife observatory for 30 persons/day. The AVA also proposed a backcountry recreation lodge for Kalinin Bay and Sinitsin Bay, as well as recreation developments in the vicinity of Neva Strait and Salisbury Sound.

The Forest Plan appeal filed by SEACC identified three of the six VCUs that are wholly or partially located within the area as part of the Sitka Local Use Area, a "SEACC Special Area", where clearcutting should not be permitted. The appeal filed by the Hoonah Indian Association et al. requested that logging not be permitted along "the stretch of lands and islands on both sides of the various narrows that span from Sitka Sound to

Hoonah Sound" because the subsistence harvest of deer in this area "already exceeds the sustainable hunting level by a wide margin" and logging would exacerbate this situation. This appeal also expressed similar concerns for North Kruzof Island.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area is not within the study area of any recently completed project-level EISs.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as having important fish and wildlife habitat and populations; although not a top priority for protection, it ranked in their top third among all roadless areas.

SEACC recommended Roadless Areas 326, 327, and 329 on Kruzof Island to be permanently protected through designation as LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 326 for permanent protection as LUD II.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

Some thought the island contains valuable low elevation forest that should be protected. A number of individuals felt this area should be protected, especially because it has little timber and is heavily used by Sitkans.

(2) Nearby Roadless and Wilderness Areas and Uses: The nearest wilderness is the West Chichagof-Yakobi Wilderness, which is located directly across Salisbury Sound from the North Kruzof Roadless Area. Two other nearby wildernesses are the South Baranof Wilderness about 26 miles south of the area and the Admiralty National Monument-Kootznoowoo Wilderness, approximately 34 miles to the east.

Nearby roadless areas include Middle Kruzof (#327) and South Kruzof (#329), both on Kruzof Island; and Sitka Sound (#332), which is located directly across Neva Strait from Partofshikof Island. The Middle Kruzof (#327) and South Kruzof (#329) Roadless Areas were allocated to the Timber Production, Modified Landscape, Old-growth Habitat, Semi-Remote Recreation, and Special Interest Area LUDs. The Sitka Sound Roadless Area (#332) was assigned to the Semi-Remote Recreation, Timber Production, Scenic Viewshed, and Old-growth Habitat LUDs.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	85	140
Sitka (Pop. 8,835)	15	20
Hoonah (Pop. 860)	55	115
Angoon (Pop. 572)	35	55

The nearest stop on the Alaska Marine Highway is Sitka.

(4) Relative Contribution to the National Wilderness Preservation System: The North Kruzof Roadless Area is located on the north end of Kruzof Island and includes Partofshikof Island, which is located immediately east of the area, as well as a number of smaller offshore islands and rocks. The area is generally bordered to the north by Salisbury Sound, to the west by the open Pacific Ocean, and to the south by developed areas that extend the width of the island from Gilmer Bay to Krestof Sound. Non-National Forest System lands border the area to the northwest. Neva Strait borders the area to the east. Sukoi Inlet separates the Kruzof Island portion of the area from Partofshikof Island. The topography of the area is generally characterized by small irregular mountains or ridges, 1,000 to 2,000

feet in elevation, with steep slopes. Numerous rocky crests and sharp ridges are found scattered throughout the area. The coastline is scalloped with bays and coves, and encompasses Sukoi Strait between Kruzof Island and Partofshikof Island.

The area generally appears natural and unmodified. The natural integrity and apparent naturalness is very high. There is a relatively high opportunity for solitude and primitive recreation within the area.

Approximately 12 percent of the landscape is considered distinctive from a scenery standpoint. There are no known features of ecologic, geologic, scientific, or cultural significance in this area.

The roadless area includes about 4,673 acres of high-volume, old-growth forest. Of these acres, approximately 371 are mapped as high-volume, coarse-canopy old growth.

The North Kruzof Roadless Area is classified as being in the West Baranof Island Biogeographic Province and makes up about 3 percent of the province. It is one of eight inventoried roadless areas found within the province that collectively make up about 62 percent of the province. The majority of the South Baranof Wilderness is also within this province and makes up approximately 29 percent of the province.

The North Kruzof Roadless Area lies completely within the Baranof-Chichagof Fjordlands Ecological Section. This portion represents 1 percent of the entire ecological section, which is well represented in existing wilderness (28 percent) and other non-development LUDs (35 percent) with an additional 13 percent in LUD II.

This roadless area is entirely within the Sitka Sound Complex Ecological Subsection; this portion of the roadless area represents 14 percent of the entire ecological subsection, which is well represented in non-development LUDs (67 percent), but does not occur in wilderness or LUD II.

The North Kruzof Roadless Area was rated 22 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 38th from the highest (along with 8 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the roadless area in an unroaded condition, but there has been little support for designating the area as wilderness. Designation of the area would add Congressional protection to about 14 percent of the Sitka Sound Complex Ecological Subsection, which currently contains no areas under Congressional protection. Designation would create a relatively small wilderness that does not have any outstanding or unique values or features. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate.

V. Environmental Consequences.

The North Kruzof Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 71 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 29 percent of the roadless area. The land in the development LUDs includes an estimated 489 acres that are suitable for timber production (1 percent of the suitable acres on the Sitka Ranger District). Less than 10 of the suitable acres are classified as high-volume, coarse-canopy old growth. The area is considered to have low potential mineral development. However, the USGS Mineral Resources Data website shows an explored claim for copper and unexplored molybdenum resources in the Sealion Cove area. This area contains 17,510 acres of undiscovered locatable mineral resources. The values associated with the natural settings of the roadless area could be affected by developments allowed by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and recreation developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including scenic values, would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to about 14 percent of the Sitka Sound Complex Ecological Subsection, which currently contains no areas under Congressional protection.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed and the potential for other development, including recreation and mineral, would be significantly restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including scenic values, would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to about 14 percent of the Sitka Sound Complex Ecological Subsection, which currently contains no areas under Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 326 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								25,373
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	8,239	8,239	8,239	8,239	8,239		8,239	
Semi-remote Recreation	9,786	9,786	9,786	9,786	9,786		9,786	
Recommended LUD II						25,373		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production	7,348	7,348	7,348	7,348	7,348		7,348	
TOTAL	**25,373**	**25,373**	**25,373**	**25,373**	**25,373**	**25,373**	**25,373**	**25,373**
Suitable Timber Lands	489	489	489	489	489	**0**	489	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Middle Kruzof (327)

ACRES (NFS): 15,127

BIOGEOGRAPHIC PROVINCE: West Baranof Island

ECOLOGICAL SECTION: Baranof-Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 15

I. Overview and Description

(1) Location and Access: The area is located in the middle of Kruzof Island. The area is bordered on the north by areas developed for timber management that cross the Island from Gilmer Bay to Sukoi Inlet. Similar developed areas that cross the island from Shelikof Bay to Mud Bay border the area to the south. Shelikof Bay, the open Pacific Ocean, and Gilmer Bay border the area to the west. Krestof Sound borders the area to the east. The area also includes the Nedezhda Islands in Krestof Sound and a number of small offshore islands and rocks.

The area is located approximately 15 miles northwest of Sitka and 90 air miles southwest of Juneau. Both Juneau and Sitka are serviced by the Alaska Marine Highway. Access to the area is primarily by boat or floatplane along both the Pacific Ocean and the Krestof Sound coastlines. Access to the area is generally good due to the bays that provide sheltered anchorage for boats. There are no National Forest System Trails within the area. The forest roads that border the area to the north and south and extend north into the area provide access to the edge of the area. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Use of the area has been primarily for hunting, fishing, recreation, and temporary occupancy. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found.

(3) Geography and Topography: The area is generally characterized by small irregular mountains or ridges 1,000 to 2,000 feet in elevation with steep slopes. Rocky crests and sharp ridges are found scattered throughout the area. The eastern portion of the area is gently sloping. The rocky shoreline is characterized by forested lowlands with a relatively gentle slope and interspersed with small gravel or sandy beaches. The few streams in the area are generally short and flow directly to saltwater.

There are 23 miles of shoreline along saltwater. There are 56 acres of alpine and 201 acres of rock. There are 80 acres of freshwater lakes in the area, although none of the lakes are large. The area also includes 67 acres of small islands.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the West Baranof Island Biogeographic Province. Topographically, Baranof Island is the most rugged of all the islands in Southeast Alaska. The outer coast of this province is dotted with hundreds of small islands. All forest plant associations except those in the Western redcedar series and those found around large mainland rivers occur in this province.

Ecological Section/Subsection. The Middle Kruzof Roadless Area is contained entirely within the Baranof-Chichagof Fjordlands Ecological Section (M247B). This area is represented by two ecological subsections (see table below). The Sitka Sound Ecological Subsection is mostly covered in a blanket of

ancient volcanic ash approximately 2 – 6 feet deep. Where the ash has been washed away, Sitka graywacke, granite, and low-grade metamorphic rocks are exposed. The Sitka Sound Complex Ecological Subsection is relatively low in elevation and there are no glaciers, although there are some permanent snowfields. Mixed conifer and hemlock-spruce forests dominate the lower elevations and shorelines, and forested wetlands of lodgepole pine and mixed conifer are abundant. The Mount Edgecumbe Volcanics Ecological Subsection contains a rare landscape of scoria cones and lava fields that form along a transform fault. The symmetrical scoria cones, found on the southern portion of Kruzof Island, create moderate to high gradient stream channels in a radial pattern. This feature is unique to thin subsection in all of Southeast Alaska. The slopes of the cones produce well-drained soils and support productive hemlock-spruce forests. On the low-relief lava field, wet organic soils support lower productive forests ranging from hemlock-cedar to lodgepole pine-cedar peatlands (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Baranof-Chichagof Fjordlands	Sitka Sound Complex	60%
	Mount Edgecumbe Volcanics	40%

(b) Soils: Shallow mineral soils with good drainage can be found on steeper slopes due to rapid loss of material by erosion and efficient rainwater runoff. Deep, well drained soils commonly occur below the shallow soils on the gentler slopes where transported soil materials have collected. Poorly drained soils are found associated with low relief and impermeable subsurface layers. Soils in the area are also influenced by deposits of volcanic ash. In locations with poor drainage, deep organic soils (muskegs) tend to form. In riparian areas, soil zones tend to contain sand and gravels as a result of flood deposition.

(c) Vegetation: The vegetation of this roadless area consists primarily of typical spruce-hemlock forests. Western hemlock-Sitka spruce dominate the overstory while the understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Muskegs are abundant within this area, however due to their small size and association with forested sites, accurate acreage estimates are difficult and 744 acres have been mapped. These areas, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low elevation timber stands where drainage is restricted. Trees within the muskegs are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska cedar.

At elevations generally above 2,000 feet, the plant communities are characterized by low shrubs, grasses, and sedges. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 13,429 acres mapped as forest land, of which 7,894 acres or 59 percent are mapped as productive old-growth forest. Of the productive old growth, 1,807 acres or 23 percent are mapped as high-volume old-growth forest. The productive old growth includes about 11 acres of high-volume, coarse-canopy old growth. There are 56 acres of second growth forest where beach harvest has occurred in the past.

(d) Fish Resources: The Anadromous Waters Catalogue (ADF&G, 1998) shows five unnamed fish-bearing streams in this area. These streams drain into Gilmer Bay and Krestof Sound. These streams provide habitat for coho, pink and chum salmon, and Dolly Varden char.

(e) Wildlife Resources: There are many varied wildlife resources in this roadless area. Brown bear and Sitka black-tailed deer inhabit this area. Birds and waterfowl rearing and nesting areas are abundant. Bald eagle habitat, including nesting and roosting trees, is found along the shorelines of this roadless area.

MacDonald and Cook (1999) do not list black bear, wolves, moose, or mountain goats as inhabiting this area.

(5) Management Direction and Current Uses: This area was allocated to four different Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These four LUDs are Timber Production, Modified Landscape, Semi-Remote Recreation, and Old-growth Habitat.

LUD	Acres
Timber Production	7,966
Modified Landscape	4,252
Semi-Remote Recreation	1,984
Old-growth Habitat	926

Approximately 81 percent of the roadless area was allocated to a development LUD (Timber Production and Modified Landscape), which allow timber harvest and associated road construction. The Timber Production LUD was assigned to approximately 53 percent of the roadless area. Located along the south boundary, approximately 28 percent of the roadless area was allocated to the Modified Landscape LUD.

Approximately 19 percent of the roadless area was allocated to a non-development LUD (Semi-Remote Recreation and Old-growth Habitat). Along Krestof Sound, approximately 13 percent of the roadless area was allocated to the Semi-Remote Recreation LUD. Around Gilmer Bay, approximately 6 percent of the roadless area was allocated to the Old-growth Habitat LUD.

Recreational use of the area is primarily for hunting, fishing, and enjoying the scenery. This use is scattered across the area, with the usual concentrations near lakes, streams, and shorelines. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified the four VCUs partially located within the area as subsistence use areas with a high sensitivity to disturbance.

(6) Appearance (Apparent Naturalness): Much of the area is considered unmodified except for those areas primarily located near the boundary with evidence of current or historic use. Older beach logging has occurred in some areas along the Krestof Sound shoreline. The narrow shape of the area and the fact that it wraps around a large area of adjacent developed areas makes it difficult to ignore the adjacent developments to the north and south. These developed areas are visible when viewing the roadless area from Shelikof Bay or from locations within the area itself.

(7) Surroundings (External Influences): The area is bordered by saltwater on two sides. External influences on those sides are limited to the sights and sounds of motorized boats. The north and south boundaries adjoin developed areas. These developments have had local effects on the roadless area. The sights and sounds of motorized activities in these adjacent areas affect much of the roadless area due to its narrow shape and the way it wraps around these developed areas. The sight and sound of airplanes overhead also exerts an external influence on the area.

(8) Attractions and Features of Special Interest: The area contains five inventoried recreation places, which cover 14,568 acres, or 96 percent of the roadless area. The natural features of the area, the scenery, and the opportunity to see wildlife are all considered attractions. These are no National Forest System Trails or public recreation cabins in this roadless area. There are no other attractions or features of special interest.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of this roadless area are basically the same as they were in 1989. They are, however, slight differences as the buffers surrounding the adjacent roaded and harvested areas have been modified slightly.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified except for the evidence of current and historic use of the area. These effects, although locally evident, have a very low overall effect on the natural integrity of the area. Both the relative size of the developments and their location along the shoreline or boundary of

the area contribute to this low impact. The long-term ecological processes are intact and operating with the effect of human influences on natural processes unmeasurable. However, the narrow shape of the area and the fact that it wraps around a larger developed area makes it difficult to ignore the adjacent developments when viewing the roadless area from Shelikof Bay or from within the roadless area itself. These factors combine to reduce this area's overall natural integrity and apparent naturalness and its suitability for wilderness classification. The area is rated as low to very low for natural integrity and apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a low opportunity for solitude and moderate opportunity for primitive recreation within the area. Recreational use of the area is relatively limited and dispersed, so that encounters with other visitors are unlikely. The sight or sound of airplanes overhead and boats along the coastlines can occasionally intrude on a visitor's solitude. There is motorized recreation occurring both on the adjacent road systems and in some off-road locations that can also be heard.

The area provides only a moderate opportunity for primitive recreation as a result of its size, lack of topographic screening, and physical challenges. There are few lakes, ponds, or streams that could potentially contribute to these opportunities. One outfitter/guide reported using this area in 1999. This use was limited to one group of eight clients camping on Nedezhda Island. The absence of developed recreational facilities enhances the opportunity for primitive recreation.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	12,567	83%
Semi-Primitive Motorized (SPM)	534	4%
Roaded Natural (RN)	89	1%
Roaded Modified (RM)	1,912	13%

The area contains five inventoried recreation places, which cover 14,568 acres, or 96 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	1	12,567
SPM	0	0
RN	1	89
RM	4	1,912

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are no National Forest System Trails or public recreation cabins located in the area. A Forest Service recreation cabin and trail in Shelikof Bay south of this roadless area are the closest developed recreation opportunities.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual

VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Middle Kruzof Roadless Area was 22 out of 28 possible points. The rating was re-evaluated for this updated version of the Analysis of the Management Situation. Based on this re-evaluation, the area was given a rating of 15, which reflects the effects of the adjacent developments including those on solitude and primitive recreation opportunities.

(4) Ecologic and Geologic Values: This area, centrally located on Kruzof Island, is bordered to the north and south by road systems and associated timber harvest areas that extend the width of the island. It is not part of a larger unroaded land area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list any of the VCUs in this area as primary producers of salmon or sportfish.

The Anadromous Waters Catalogue (ADF&G, 1998) shows five unnamed fish-bearing streams in this area. These streams, which drain into Gilmer Bay and Krestof Sound, provide habitat for coho, pink, and chum salmon, and Dolly Varden char.

(b) Wildlife Resources: There are many varied wildlife resources in this roadless area. Bird and waterfowl rearing and nesting areas are abundant. Generally, the area provides deer and brown bear habitat. Bald eagle habitat, including nesting and roosting trees, is found along the shorelines of this roadless area. MacDonald and Cook (1999) do not list black bear, wolves, moose, or mountain goats as inhabiting this area.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Peale's peregrine falcons pass through the forests during their spring and fall migration flights. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, twelve sensitive plant species are known or suspected to occur in the Sitka Ranger District. The area contains no known resident, threatened, or endangered species.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are no glaciers or unique geologic features.

(5) Scientific and Educational Values: There are no known features of ecologic, geologic, scientific, or cultural significance in this area. There are no Research Natural Areas in the Middle Kruzof Roadless Area. Sitka, located approximately 15 miles southeast of the area, is the closest larger community with school-age children.

(6) Scenic Values: The visual character type of this roadless area is classified as Admiralty-Chichagof. Landforms in this character type are generally rounded. Rocky islands, reefs, and rock bluffs are found frequently on the outer coast. Rocky shorelines interspersed with small gravel beaches are found throughout the character type. Streams are generally short and swift on the west side of the roadless area. Saltwater bays and estuaries are numerous and exhibit much variety, from small sheltered coves to large exposed forms. Often dramatic high-energy seas occur on the outer coast. The Middle Kruzof Roadless Area is a poor example of this visual character class as it has few of the described features, or the features are limited or poorly represented.

Evidence of historic use includes timber harvest sales along the border of the area. Current use includes various short-term occupancies, and other evidence of the use of the area and the surrounding waters. This evidence, although locally significant, has a very low overall effect on the scenic value of the area. The narrow shape of the area and the fact that it wraps around a larger developed area makes it difficult to ignore the adjacent developments to the north and south. These developed areas are visible when viewing the roadless area from Shelikof Bay or from locations within the area itself.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Gilmer Bay (boat anchorage); Gilmer Bay and Shelikof Bay (small boat routes); Kruzof Island Roads (#7590) (public use roads); the west coast of Kruzof Island (tour ship route); Iris Meadows (#521) (hiking trail); and Iris Meadows (dispersed recreation area).

About 6 percent of the roadless area was inventoried as Variety Class A (possessing landscape diversity unique for the character type). Approximately 18 percent of this roadless area was inventoried as Variety Class B (possessing landscape characteristics common for the character type). Most of the area, approximately 75 percent, is inventoried as Variety Class C (possessing a low degree of landscape diversity).

Approximately 72 percent of this roadless area was inventoried as Existing Visual Condition (EVC) I, which appears to be untouched by human activity. About 2 percent of the area was inventoried as EVC IV, where changes in the landscape are easily noticed by the average visitor, and may attract some attention. Twenty-five percent of the area is inventoried in EVC V, where changes in the landscape are obvious to the average person and appear to be major disturbances.

(7) Social, Cultural, and Historical Values: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Use of the area has been primarily for hunting, fishing, recreation, and temporary occupancy. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found. The area is located approximately 10 miles northwest of Sitka.

The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified the four VCUs partially located within the area as subsistence use areas with a high sensitivity to disturbance. Two of these VCUs (303 and 309) were included among the VCUs with highest community use value (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The Middle Kruzof Roadless Area generally does not have a boundary that is well defined by topographic features. The majority of the boundary for this L-shaped area is defined by developed areas. Both the north and south boundaries of the area follow road systems and associated developments over hills and though valleys. The west and east boundaries defined by Gilmer Bay, the Pacific Ocean, and Shelikof Bay, and Krestof Sound, respectively, are easily described and recognized.

The feasibility of management of this area as wilderness or in an unroaded condition is reduced due to significant motorized access along both the north and south boundaries. The manageability is also affected by the fact that this L-shaped area is only one mile wide along the western leg, and not much over 2 miles wide along the northern leg.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: Motorized recreation use on the Kruzof Island road system and the attraction of the Shelikof Recreation Cabin and Shelikof Bay will continue to draw visitors to the roaded area south of this roadless area. The topography, shape, and size will restrict the opportunities for managing the Middle Kruzof Roadless Area for recreational opportunities in an unroaded condition.

In 1996, the Alaska Visitors Association (AVA) proposed the following recreation developments for Gilmer Bay: hut-to-hut hiking for 12 persons/day, day boat docks with a 20 person capacity, flight seeing landings for 10 persons/day, day use recreation for 100 persons/day, and a day use wildlife observatory for 30 persons/day. It should be noted that the Middle Kruzof Roadless Area only includes the south shore of Gilmer Bay. The majority of the north shore is located within the North Kruzof Roadless Area.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: There are no fish enhancement projects planned for this area.

(4) Wildlife Resources: There are no wildlife enhancement projects planned for this area.

(5) Timber Resources: There are 7,894 acres mapped as productive old growth in the roadless area. There are also 56 acres of second growth where beach harvest has occurred in the past. Of these acres, 5,957 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,815 acres or 12 percent of this roadless area are estimated to be suitable for timber production. Approximately 436 of the suitable acres are mapped as high-volume old growth; of these acres, none are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area is dependent on higher market values and harvest methods that would allow harvest with roading.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present in the area. There are no known epidemic disease occurrences.

(7) Minerals: There are no known claims in this area. This area contains 3,542 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); all of these acres are considered to have low potential for development.

(8) Transportation and Utilities: There are no proposed transportation or utility corridors within or adjacent to this area. The area is bordered to the north and south by forest roads and associated harvest units which are likely to be extended into the roadless area to access areas that the Forest Plan allows timber harvest.

(9) Water Availability and Use: No developed recreation cabins or other facilities exist to create a water demand. There are no existing or planned hydroelectric or domestic water projects in the area.

(10) Areas of Scientific Interest: There are no known areas of scientific interest in the roadless area.

(11) Land Use Authorizations: No land use authorizations exist within the roadless area except the ongoing outfitter and guide operations that use portions of the area.

(12) Land Status: The area consists entirely of National Forest System lands.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Most use of the area is associated with recreational boating, hunting and fishing, and viewing the wildlife and scenery of the area.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Middle Kruzof Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also proposed that Iris Meadows Creek be protected as a Wild and Scenic River. The developed areas that border the area to the north and south were identified for protection as Restoration Areas.

(c) Public Input During Forest Plan Revisions and Appeals: This area was specifically addressed in public input received during the Forest Plan revision and appeal. Commenters requested that Kruzof Island be managed for Semi-Primitive or Primitive recreation, or Old Growth. Middle Kruzof Island was identified by another commenter as an area that should be managed for a local wood products industry. Comments were also provided for Management Area (MA) C44, which includes the Middle Kruzof Roadless Area. The Sierra Club Juneau Group requested that there be no further logging in MA C44 until its impact on “our resource of the future, tourism” is fully assessed. Timber industry commenters requested that the area be managed for timber production, emphasizing its importance to the Sitka economy. The AVA proposed the following recreation developments for Gilmer Bay: hut-to-hut hiking for 12

persons/day, day boat docks with a 20-person capacity, flight-seeing landings for 10 persons/day, day-use recreation for 100 persons/day, and a day-use wildlife observatory for 30 persons/day.

Iris Meadows Creek was specifically identified in the Forest Plan appeal filed by the Sitka Conservation Society, who requested that it be given wild and scenic river designation. They identified Iris Meadows Creek as a rare resource that will be more valuable over time than logging the same area would be. The Forest Plan appeal filed by the Southeast Alaska Conservation Council (SEACC) identified the four VCUs that are partially located within the area as part of the Sitka Local Use Area, a "SEACC Special Area", where clearcutting should not be permitted. The appeal filed by the Hoonah Indian Association et al. requested that logging not be permitted along the "stretch of lands and islands on both sides of the various narrows that span from Sitka Sound to Hoonah Sound" because the subsistence harvest of deer in this area "already exceeds the sustainable hunting level by a wide margin" and logging would exacerbate this situation.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area is not within the study area of any recently completed project-level EISs.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 327 for permanent protection as LUD II. SEACC recommended Roadless Areas 326, 327, and 329 on Kruzof Island to be permanently protected through designation as LUD II.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

Some thought the island contains valuable low elevation forest that should be protected.

(2) Nearby Roadless and Wilderness Areas and Uses: The closest wilderness is the West Chichagof-Yakobi Wilderness, approximately 9 miles north of the Middle Kruzof Roadless Area. Two other nearby wildernesses are the South Baranof Wilderness, about 24 miles south of the area, and the Admiralty National Monument-Kootznoowoo Wilderness, approximately 36 miles to the east.

Nearby inventoried roadless areas include North Kruzof (#326) and South Kruzof (#329), both on Kruzof Island, and Sitka Sound (#332), which includes the islands east of Port Krestof and Whitestone Peninsula in Sitka Sound. The North Kruzof (#326) Roadless Area was allocated to the Timber Production, Old-growth Habitat, and Semi-Remote Recreation LUDs. The South Kruzof (#329) Roadless Area was assigned to the Old-growth Habitat, Semi-Remote Recreation, and Special Interest Area LUDs. The Sitka Sound Roadless Area (#332) was allocated to the Semi-Remote Recreation, Timber Production, Scenic Viewshed, and Old-growth Habitat LUDs.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	90	145
Sitka (Pop. 8,835)	15	15
Hoonah (Pop. 860)	60	120
Angoon (Pop. 572)	45	65

The nearest stop on the Alaska Marine Highway is Sitka.

(4) Relative Contribution to the National Wilderness Preservation System: The area is located in the middle of Kruzof Island. The area is bordered on the north by areas developed for timber management that cross the Island from Gilmer Bay to Sukoi Inlet. Similar developed areas that cross the island from Shelikof Bay to Mud Bay border the area to the south. Shelikof Bay, the open Pacific Ocean, and Gilmer Bay border the area to the west. Krestof Sound borders the area to the east. The area also includes the Nedezhda Islands in Krestof Sound and a number of small offshore islands and rocks. The area is generally characterized by small irregular mountains or ridges 1,000 to 2,000 feet in elevation with steep slopes. Numerous rocky crests and sharp ridges are found scattered throughout the area. The coastline is scalloped with bays and coves.

The area is unmodified, but the relatively small size of the area and its proximity to adjacent developed areas make it appear modified from some viewpoints. The area is rated as low to very low for natural integrity and apparent naturalness. There is a low opportunity for solitude and moderate opportunity for primitive recreation within the area.

Approximately 6 percent of the landscape is considered distinctive from a scenery standpoint. There are no known features of ecologic, geologic, scientific, or cultural significance in this area.

The roadless area includes about 1,807 acres of high-volume, old-growth forest. Of these acres, approximately 11 are mapped as high-volume, coarse-canopy old growth.

The Middle Kruzof Roadless Area is classified as being in the West Baranof Island Biogeographic Province and makes up about 2 percent of the province. It is one of eight inventoried roadless areas found within the province that collectively make up about 62 percent of the province. The majority of the South Baranof Wilderness is also within this province and makes up approximately 29 percent of the province.

The Middle Kruzof Roadless Area lies completely within the Baranof-Chichagof Fjordlands Ecological Section. This portion represents 1 percent of the entire ecological section, which is well represented in existing wilderness (28 percent) and other non-development LUDs (35 percent) with an additional 13 percent in LUD II.

The majority of this roadless area (60 percent) is located within the Sitka Sound Complex Ecological Subsection. This portion of the roadless area represents 5 percent of the entire ecological subsection, which is well represented in non-development LUDs (67 percent), but not in wilderness or LUD II. The remaining 40 percent of this roadless area is located within the Mount Edgecumbe Volcanics Ecological Subsection. This portion of the roadless area represents 8 percent of the entire ecological subsection, which is well represented in non-development LUDs (75 percent), but not in wilderness or LUD II.

The Middle Kruzof Roadless Area was rated 15 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 103rd from the highest (along with three other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for managing the roadless area in an unroaded condition, and there has been little support for designating the area as wilderness. Designation of the area would add Congressional protection to about 5 percent of the Sitka Sound Complex Ecological Subsection and about 8 percent of the Mount Edgecumbe Volcanics Ecological Subsection, which currently contain no areas under Congressional protection. Designation would create a small wilderness that does not have any outstanding or unique values or features, and that is heavily influenced by developments on adjacent lands. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be very low.

V. Environmental Consequences

The Middle Kruzof Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 19 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 81 percent of the roadless area. The land in the development LUDs includes an estimated 1,815 acres that are suitable for timber production (4 percent of the suitable acres on the Sitka Ranger District). None of the suitable acres are mapped as high-volume, coarse-canopy old growth. The area contains 3,542 acres of undiscovered locatable mineral resources; all of these acres are

considered to have low potential for development. The values associated with the natural settings of the roadless area could be affected by developments allowed by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and recreation developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including scenic values, would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to about 5 percent of the Sitka Sound Complex Ecological Subsection and about 8 percent of the Mount Edgecumbe Volcanics Ecological Subsection, which currently contain no areas under Congressional protection.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed and the potential for other development, including recreation and mineral, would be significantly restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including scenic values, would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to about 5 percent of the Sitka Sound Complex Ecological Subsection and about 8 percent of the Mount Edgecumbe Volcanics Ecological Subsection, which currently contain no areas under Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 327 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								15,127
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	926	926	926	926	926		926	
Semi-remote Recreation	1,984	1,984	1,984	1,984	1,984		1,984	
Recommended LUD II						15,127		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	4,252	4,252	4,252	4,252	4,252		4,252	
Timber production	7,966	7,966	7,966	7,966	7,966		7,966	
TOTAL	**15,127**	**15,127**	**15,127**	**15,127**	**15,127**	**15,127**	**15,127**	**15,127**
Suitable Timber Lands	1,815	1,815	1,815	1,815	1,815	**0**	1,815	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Hoonah Sound (328)

ACRES (NFS): 97,329

BIOGEOGRAPHIC PROVINCE: East Chichagof Island

ECOLOGICAL SECTION: Boundary Ranges

2003 WILDERNESS ATTRIBUTE RATING: 25

I. Overview and Description

(1) Location and Access: The Hoonah Sound Roadless Area is located on Chichagof Island. The West Chichagof-Yakobi Wilderness borders the area to the north and west. Hoonah Sound and Peril Strait border the area to the east and south, respectively. The area also includes Moser and Emmons Islands, which are separated from the Chichagof Island portion of the area by the South Arm of Hoonah Sound. A small peninsula just north of Moser Island, adjacent to the West Chichagof-Yakobi Wilderness, is also part of this area. The city of Sitka is located approximately 25 miles south of the area. The community of Hoonah is located about 30 miles to the north. Access to the area is by boat or floatplane.

There are roads in exclusion areas at Ushk Bay, Fick Cove, and Patterson Bay that provide foot or vehicle access to the associated river valleys and the edge of the roadless area. There is all-terrain vehicle (ATV) use on these roads as well as some off-road use. There are no trails in the area. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: Southeast Alaska is believed to have been settled about 10,000 to 11,000 years ago. There are human occupancy sites in the general vicinity of the Hoonah Sound roadless area that date to 9,000+ years before present (BP). The oldest known site within the Hoonah Sound Roadless Area dates to approximately 3,000 BP. This date may be pushed back by future field investigations.

Tlingit oral history indicates that the upper areas of Hoonah Sound were not used except for seasonal hunting, fishing, and gathering. The northernmost known permanent village site in the Hoonah Sound area is located in this roadless area. Seasonal villages have been located along Hoonah Sound to Patterson Bay. The area was apparently used by Alaska Native peoples from the Sitka, Hoonah, and Angoon areas. In 1799, 100 to 150 of Alexandra Baranov's Aleut hunters died at Poison Cove from eating "mussels" from the tideflats.

Early European entries were for trade, hunting, and exploration. Lt. Lisiansky of the Russian Navy mapped the Peril Strait area in 1805. Peril Strait was important then, as now, for access to the inland waterways, which provide protected north-south water travel, as well as access to the inland islands.

The primary activities in this area have remained fishing, hunting, and fur gathering. Although fish canneries and traps were important in Hoonah Sound in the early 20th Century, none have been found in the roadless area. Emmons and Vixen Islands were used for fox farming from 1920 to 1925. Rodgers Point was the site of a Federal Aviation Administration VHF radio site from 1950 to 1966 and an Alaskan Coastal Airlines "Radio-H" station from 1953 to 1960. Recent activities include logging and road construction activities in Ushk and Patterson Bays and Fick Cove.

(3) Geography and Topography: This area displays a wide terrain variation. The topography, typical of most of the larger island areas, is characterized by flat river valleys surrounded by mountains. Terrain relief ranges from sea level to more than 2,500 feet in elevation at Pinnacle Peak. Although these mountains are not among the highest in the area, they are steep and highly dissected by streams. The lower reaches of the rivers follow

meandering courses in broad, flat floodplains, while the headwaters are in steep, narrow valleys. There are numerous small lakes scattered about the area. Most of the smaller lakes lie above 1,000 feet in elevation. There are a total of 315 acres of freshwater lakes.

There are approximately 101 miles of saltwater shoreline and 6,620 acres of small islands, including Mercer Island. There are also 77 acres of snow and ice, 4,880 acres of alpine tundra, and 5,185 acres of rock.

(4) Ecosystem:

(a) Classification: Biogeographic Province. This area is located within the East Chichagof Island Biogeographic Province. This province has a dryer and colder climate than the outer coast of Chichagof Island and the winter snow pack is generally greater. Chichagof Island is deeply dissected into three peninsulas that may be functioning biologically more like separate islands. Vegetation in this province represents a modal condition similar to Admiralty Island Province.

Ecological Section/Subsection. The Hoonah Sound Roadless Area is contained entirely within the Baranof-Chichagof Fjordlands Ecological Section (M247B). This area is represented by three ecological subsections (see table below). The Ushk-Patterson Bay Granitics Ecological Subsection dominates the roadless area. It contains granitic mountains that hug the shores of Peril Strait. Topographic relief is relatively less here, yet the steep slopes create a rugged terrain. Alpine meadows and barrens thrive on the rounded mountaintops while hemlock-spruce forests are present on the well-drained soils of the slopes and some valleys. Neighboring volcanic explosions blanketed this area long ago and much of the ash that once covered the peaks is now settled in the valley bottoms and coupled with organic soils, support vast wetland complexes. The West Chichagof Complex is underlain by bedrock comprised of metamorphosed greenstones, phyllites, and graywacke rock. A unique Whitestrip Marble formation with caves, sinkholes, and shafts crosses this landscape. Spodosol soils cover a majority of this subsection. Atop the mountains, alpine barrens, meadows, and rock outcrops are prominent. The mid to lower elevations have well drained soils that support productive hemlock-spruce and scrubby mixed-conifer forests (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Baranof-Chichagof Fjordlands	Ushk-Patterson Bay Granitics	92%
	West Chichagof Complex	8%
	North Baranof Complex	<1%

(b) Soils: Glacial activities, combined with a basically sedimentary bedrock, are primary factors in soil development in this roadless area. Other factors are high rainfall, cool summer temperatures, and a short growing season. Dense vegetative growth, combined with a slow organic matter breakdown, leaves a thick duff layer on most of the subalpine soils.

The roadless area's soils are highly variable and range from exposed bedrock and very shallow, poorly developed soils in the higher elevations to deep fluvial and colluvial deposits in the flat river bottoms. There are large areas of deep supersaturated or inundated organic soils (muskeg) over much of the area. The steeper slopes are generally well-drained, shallow, moderately productive soils. The valley bottoms are generally deep, well- to poorly-drained soils, and are highly productive. Many of the soils are highly leached because of the rainfall.

(c) Vegetation: Dense western hemlock-Sitka spruce forests dominate the overstory, with an understory of shrubs such as red huckleberry, rusty menziesia, and devil's club, and a forest floor covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian understory vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Muskegs, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low elevation timber stands where drainage is restricted. Trees are sparse and consist mainly of stunted

hemlock, lodgepole pine, and Alaska-cedar. Approximately 6,524 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. At elevations above approximately 2,000 feet, alpine plant communities (mapped as 4,880 acres) are characterized by low shrubs, grasses, and sedges. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 75,659 acres mapped as forest land, of which 34,805 acres or 46 percent are mapped as productive old-growth forest. Of the productive old growth, 11,310 acres or 32 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,542 acres of high-volume, coarse-canopy old growth. There are 769 acres of second growth resulting from earlier beach harvest.

(d) Fish Resources: There are four Pacific salmon (sockeye, coho, pink, and chum) valuable for commercial, subsistence and sport fishing that spawn and rear in these waters. In addition, the area provides habitat for steelhead trout, Dolly Varden char, stickleback, and smelt. Small populations of chinook salmon reportedly inhabit bays and estuaries of the area. Deep Bay Creek produces the largest runs of pink salmon in the area. Other highly productive streams include Ushk Bay, Fick Cove, and Patterson Bay.

(e) Wildlife Resources: Wildlife species present in this roadless area include brown bear, Sitka black-tailed deer, mountain goats, pine marten, river otter, mink, and beaver, as well as smaller mammals and several amphibians. There are relatively few resident bird species; however, the area is used by many migratory species, including waterfowl. Eagles are common in the coastal zone. Goshawks and harlequin ducks have been observed in the area. Moose have not been reported here.

(5) Management Direction and Current Uses: This area was allocated to six different Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These six LUDs are Timber Production, Scenic Viewshed, Modified Landscape, LUD II, Old-growth Habitat, and Semi-Remote Recreation.

LUD	Acres
Timber Production	32,729
Scenic Viewshed	3,191
Modified Landscape	1,197
LUD II	53,667
Old-growth Habitat	6,430
Semi-Remote Recreation	115

Approximately 38 percent of this area was allocated to LUDs that allow timber harvest and associated road construction (Timber Production, Scenic Viewshed, and Modified Landscape). The Timber Production LUD was assigned to approximately 34 percent of the roadless area. Around Poison Cove and Ushk Point, approximately 3 percent of the roadless area was allocated to the Scenic Viewshed LUD. The Modified Landscape LUD was assigned to approximately one percent of the roadless area, located primarily around Ushk Bay.

Over half of this roadless area, 62 percent, was allocated to a non-development LUD (LUD II, Old-growth Habitat, Semi-Remote Recreation). Over half the roadless area, approximately 55 percent, was allocated to the LUD II designation. This LUD II area, located around the South Arm of Hoonah Sound, includes Patterson Bay, Fick Cove, Moser Island, and Emmons Island. Areas around Ushk Bay, Rapids Point, and Deep Bay were allocated to the Old-growth Habitat LUD, which account for approximately 7 percent of the roadless area. The smaller islands associated with the roadless area that are not in LUD II, were allocated to the Semi-Remote Recreation LUD, which accounts for less than one percent of the roadless area.

There are no ongoing management activities within this area beyond some fish habitat improvement. Timber harvest and road construction along Patterson and Ushk Bays and Fick Cove are excluded from the boundaries of the roadless area. There are, however, areas of beach logging along the shoreline that are included in the area. There are no special use permits for upland structures. There is one public recreation cabin and anchor buoy located on the north end of Moser Island on the South Arm side. There are three or more unauthorized (trespass) cabins.

Recreational use of the area is primarily for hunting and fishing, and enjoying the scenery. This use is scattered through the area with the usual concentrations near lakes, streams, and shorelines. Outfitter/guides use this area. Subsistence use also occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified three VCUs partially located within the area as subsistence use areas with a high sensitivity to disturbance.

(6) Appearance (Apparent Naturalness): Although the areas adjacent to developed areas (a small portion of the total area) appear highly modified and older beach logging has occurred in a number of locations along the shoreline, the area generally appears natural and unmodified. Some minor development has occurred along the coastline, such as tent frames, but these are unobtrusive and do not generally detract from the area's naturalness. No other readily apparent signs of human activities can be seen from the surrounding bays, Sergius Narrows, or Peril Strait.

(7) Surroundings (External Influences): There are two small privately owned tracts within, but excluded from, the roadless area. These are located at Deep Bay and Poison Cove. Peril Strait is the Alaska Marine Highway route connecting Sitka with the rest of Southeast Alaska. There are approximately 10 weekly ferry passages during the summer months. In addition, there is some cruise ship and tour boat use. Peril Strait is the major connecting corridor between the west side of Baranof and Chichagof Islands and the inland waterways. Therefore, it is commonly used by sport and commercial fishing boats, as well as barge traffic. Hoonah Sound gets heavy pleasure and commercial fishing craft use. Because the roadless area is bordered by water on the east and south and the West Chichagof-Yakobi Wilderness to the north and west, with the exception of boat traffic, there is little activity in the adjoining surroundings that would adversely affect the wilderness character of the area. High altitude overflights by commercial airliners (approximately six per day) and occasional small aircraft flights may provide some distraction.

(8) Attractions and Features of Special Interest: Although the wildlife and natural beauty of the area are attractions, there is little to distinguish this from many other areas. Basic attractions are the opportunity to "get away from it all" (solitude), sportfishing, and hunting. The area contains 19 inventoried recreation places, which cover 15,415 acres, or 16 percent of the roadless area. There is one public recreation cabin located in the area. A special interest may be the diverse cultural and historic value of the general area. However, there are no interpretative or information programs at present.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: There was one relatively minor change in the boundaries of this roadless area between 1989 and 2003. The beach logged areas along the shoreline of the area were specifically excluded from the boundaries of the 1989 area. These areas are included as part of the 2003 roadless area.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified except for minor activities (including the trespass cabins) and for early cabin and camp sites, including Alaska Native activity sites. The early sites are deteriorated and grown over, making them apparent only with close examination. The existing cabins are unobtrusive and infrequent, and do not detract from the very high natural integrity or high apparent naturalness of the total area. There are also a number of beach logged areas along the shoreline. The area's appearance is generally suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The opportunity for solitude and primitive recreation is outstanding. The area's terrain is such that activities in coastal waters have little influence on areas away from the coastline. The large size of this area, coupled with the lack of activities and low visitation, contribute to the feeling of solitude. High altitude overflights by commercial airliners (approximately six per day) and occasional small aircraft flights may provide some distraction. This area is bordered to the north and west by the West Chichagof-Yakobi Wilderness area.

Outfitter/guide use was reported at eight locations in and around this area in 1999. Seventy-four groups with a total of 348 clients were reported visiting the area. Reported uses included brown bear hunting, deer hunting, fishing, sightseeing, and hiking. Patterson and Ushk Bays were the most frequently visited locations. As with all backcountry areas on the Tongass, the opportunity for challenge and risk in this area is high. The climate, the rugged terrain, the isolation and distance from population centers with medical facilities, the barriers to

communication, and the presence of large wild animals all contribute to the need for good preparation and knowledge of backcountry survival skills for anyone using this area. Hypothermia and bear encounters are just two examples of the many risks that must be considered before traveling in the backcountry of southeast Alaska.

The area provides primarily primitive recreational opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	59,473	61%
Semi-Primitive Non-Motorized (SPNM)	22,252	23%
Semi-Primitive Motorized (SPM)	2,779	3%
Roaded Modified (RM)	12,801	13%

The area contains 19 inventoried recreation places, which cover 15,415 acres, or 16 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	10	6,134
SPNM	5	4,650
SPM	2	1,961
RM	9	2,671

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There is one public recreation cabin and anchor buoy located on the north end of Moser Island on the South Arm side.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Hoonah Sound Roadless Area was 19 out of 28 possible points. A smaller portion of the area was rated separately in 1989 and received a score of 25. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 25.

(4) Ecologic and Geologic Values: This area, located on south Chichagof Island, is bordered to the west by the West Chichagof-Yakobi Wilderness.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment identified three of the seven VCUs, Ushk Bay (281), Fick Cove (282), and Patterson Bay (283), as primary salmon producers. None of the VCUs were identified as primary sport fish producers (ADF&G, 1998).

There are four Pacific salmon (sockeye, coho, pink, and chum) valuable for commercial, subsistence and sport fishing that spawn and rear in these waters. In addition, steelhead trout is a favored and valuable sportfishing species. Other species include Dolly Varden char, stickleback, and smelt. Small populations of chinook salmon reportedly inhabit bays and estuaries of the area.

Deep Bay Creek produces the largest runs of pink salmon in the area, with peak escapement counts of more than 100,000 fish (USDA Forest Service, 1994). The estimated annual peak escapement of pink salmon is 38,200, 37,200, and 57,800 for Ushk Bay, Fick Cove, and Patterson Bay, respectively. These drainages also have very good coho smolt capability (ADF&G, 1998).

(b) Wildlife Resources: Wildlife species present in this roadless area include brown bear, Sitka black-tailed deer, pine marten, river otter, mink, and beaver, as well as smaller mammals and several amphibians. There are relatively few resident bird species; however, the area is used by many migratory species, including waterfowl. The area may also receive some migratory use by Peale's peregrine falcon. Eagles are common in the coastal zone, and a total of 40 nest sites have been identified by the U.S. Fish and Wildlife Service (USFWS) in the Ushk Bay area. Goshawks are known to occur in the area. The area may also provide suitable nesting habitat for harlequin ducks.

Moose have not been reported here. Sport and subsistence deer hunting is important in this area. This is a popular brown bear hunting area. The Ushk Bay VCU (VCU 281) was identified in the top 25 percent of brown bear harvest areas by VCU based on data from 1985 to 1994 (ADF&G, 1998). The Patterson Bay VCU (VCU 283) was identified in the third 25 percent. In addition, there is pine marten and mink trapping. Moderate and high quality deer habitat areas are located along the north shorelines of Ushk Bay, Poison Cove, and Deep Bay; and along portions of the Peril Strait coastline and the main drainages. High quality brown bear habitat can be found along the major drainages, such as Ushk Creek, Bear Creek, Poison Creek, and Deep Creek.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, 12 sensitive plant species are known or suspected to occur in the Sitka Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There is a small area of high vulnerability karst resources in this roadless area near Pinnacle Peak. This represents 118 acres, or less than 1 percent, of the roadless area. There are no known glaciers or other unique geologic features.

(5) Scientific and Educational Values: There is a high probability for numerous cultural resource sites in this area. However, little study has been done in the area. There are 13 known or suspected (unconfirmed) sites, dating back to about 3,000 years before present. Future surveys may find sites contemporary with older sites in the general area and may add substantially to knowledge of pre-European culture. Most known sites are located in the coastal zone. Further field investigation may reveal an opportunity to add to the pool of scientific or ecological knowledge for other resources; however, current indications are that there is nothing unique about the area.

There are no Research Natural Areas in this roadless area. Sitka, the closest larger community, is located approximately 25 miles south of the area.

(6) Scenic Values: The visual character type of this area is classified as Admiralty-Chichagof. Landforms are generally rounded, but range to steep, rugged mountains on the west of the Hoonah Sound Roadless Area. These mountains are snowcapped most of the year. Rocky shorelines, interspersed with gravel beaches are found along Hoonah Sound and Peril Strait. Streams are often short and swift, flowing directly to saltwater. Bays and estuaries are common and show a wide range of visual characteristics. Lower slopes are densely vegetated and are interspersed with muskeg and small lakes. Upper slopes appear bare from a distance, but often contain muskeg, alpine tundra vegetation, and scattered tree cover.

Although the parts of the roadless area that are adjacent to areas managed for timber (a small portion of the total area) appear highly modified and older beach logging has occurred in a number of locations along the shoreline, the

area mostly appears natural and unmodified. Some minor development has occurred along the coastline, such as tent frames, but these are unobtrusive and do not generally detract from the area's naturalness. No other readily apparent signs of human activities can be seen from the surrounding bays, Sergius Narrows, or Peril Strait.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: Peril Strait (Alaska Marine Highway and tour ship route); Ushk Bay, Hoonah Sound (North and South Arm), Peril Strait, Deep Bay, and Patterson Bay (small boat routes); Peril Strait and Deadman Reach (saltwater use areas); and Deep Bay, Suloia Bay, Ushk Bay, and Moser Island (boat anchorages).

The area is inventoried as approximately 13 percent Variety Class A (possessing landscape diversity unique for the character type), 54 percent Variety Class B (possessing landscape characteristics common for the character type), and 33 percent Variety Class C (possessing a low degree of landscape diversity).

The majority of the area, approximately 87 percent, was inventoried as Existing Visual Condition (EVC) I. These areas appear untouched by human activity. Approximately 10 percent of the area was inventoried as an EVC IV, where changes in the landscape are easily noticed by the average visitor and may attract some attention. About 3 percent of the area is inventoried as EVC V, where changes to the landscape are obvious to the average visitor and appear to be major disturbances.

(7) Social, Cultural, and Historical Values: Southeast Alaska is believed to have been settled about 10,000 to 11,000 years ago. There are human occupancy sites in the general vicinity of the Hoonah Sound Roadless Area that date to 9,000+ years before present (BP). The oldest known site within the roadless area dates to approximately 3,000 BP. Tlingit oral history indicates that the upper areas of Hoonah Sound were not used except for seasonal hunting, fishing, and gathering. The northernmost known permanent village site in the Hoonah Sound area is located in this roadless area. Seasonal villages have been located along Hoonah Sound to Patterson Bay. The area was apparently used by Alaska Native peoples from the Sitka, Hoonah, and Angoon areas. Early European entries were for trade, hunting, and exploration. Lt. Lisiansky of the Russian Navy mapped the Peril Strait area in 1805. Peril Strait was important then, as now, for access to the inland waterways, which provide protected north-south water travel, as well as access to the inland islands. Primary activities in the area have remained fishing, hunting, and fur gathering. The city of Sitka is located approximately 30 miles south of the area. The community of Hoonah is located about 25 miles to the north.

Subsistence use also occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified three VCUs partially located within the area (VCUs 278, 279, and 281 along Peril Strait) as subsistence use areas with a high sensitivity to disturbance. VCU 279 was included among the VCUs with highest community use value and VCUs 280 and 281, partially located in the area, were included in the second tier for community use value (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: Manageability of this area as wilderness is high. The boundaries are defined by the coastline or are not critical because of the adjoining wilderness. Effects of adjoining activities are minimal because these activities are transitory in nature (i.e., saltwater-based or wilderness-related). Developments at the head of Ushk and Patterson Bays and Fick Cove may detract from the natural appearance of relatively small portions of the roadless area; however, they may also provide better access, via the existing road system, into the interior of the area. Were the Hoonah Sound Roadless Area left in an unroaded state, it would complement the West Chichagof-Yakobi Wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: The potential exists to enhance primitive and/or semi-primitive recreation opportunities. Potential opportunities include construction of trails and recreation cabins, particularly along the coast in the several protected bays. The potential also exists to provide interpretative information for cultural resource sites along the coast. In 1996, the Alaska Visitors Association (AVA) proposed the following developments for the Ushk Bay area: a backcountry recreation lodging for 100 persons, hut-to-hut hiking/kayaking/canoeing for 25 persons, day-use recreation with a 150 person capacity, and day boat docks for 50 persons.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resource: No fish enhancement projects are planned for this roadless area.

(4) Wildlife Resources: No wildlife habitat improvement projects are planned for this roadless area.

(5) Timber Resources: There are 34,805 acres mapped as productive old growth in the roadless area. There are also 769 acres of second growth where beach harvest has occurred in the past. Of these acres, 9,556 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area, (and estimated falldown and scheduling reduction factors), 2,226 acres or 2 percent of this roadless area is estimated to be suitable for timber production. Approximately 548 of the suitable acres are mapped as high-volume old growth; of these acres, 39 are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area is high in those areas of operable timber stands. The large areas of non-commercial timber and areas with marginal operability due to accessibility, limit management potential. However, there are large areas of mature-overmature timber that are operable and accessible. These stands would be viable for timber harvest. Most of these stands exhibit old-growth habitat characteristics.

The Ushk Bay Timber Sale(s) project area is located within the Hoonah Sound Roadless Area. The Record of Decision for this project (USDA Forest Service, 1994) proposed that timber harvest and road building occur in the vicinity of Ushk Bay and Poison Cove. These potential activities are under evaluation for implementation.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: The USGS Mineral Resource Data website (2001) indicates that there are a number of prospects for gold and copper, particularly in the Ushk Bay area (VCU 281).

This area contains 2,972 acres of land identified as a mineral activity tract having a low potential for experiencing mineral exploration and development of locatable minerals (Coldwell 1990, USDA Forest Service 1991). In addition, this area contains 10,735 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); all of these acres are considered to have low potential for development.

(8) Transportation and Utilities: There are no proposed transportation or utility corridors within or adjacent to this area. Access to areas that allow development under the Forest Plan would need to expand the current road system.

(9) Water Availability and Use: There are three or more unauthorized (trespass) cabins and one public recreation cabin located in the area. No other facilities exist to create water demand. There are no existing or planned hydroelectric or domestic water projects in the area.

(10) Areas of Scientific Interest: There is a small area of high vulnerability karst resources in this roadless area near Pinnacle Peak. This represents 118 acres, or less than one percent of the roadless area.

(11) Land Use Authorizations: No special use permits have been issued for specific use of this area. However, the area is used by several outfitter/guides. Possible future permits would likely be for subsistence or recreational facilities or for outfitter/guide services. The potential is low for a significant increase in most types of permits, other than for incidental use.

(12) Land Status: There are no patented private lands within the roadless area. There are two parcels of private land within the boundaries, but excluded from the roadless area. There are no other non-Federal lands or withdrawals.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The primary zone of use in the area is along Hoonah Sound and inland within one-half mile of the coastline. Heaviest use is indicated to be from Angoon and Sitka. Activities are subsistence hunting and fishing, sport hunting and fishing (particularly for salmon), and commercial fishing. These activities do not necessarily take place within the roadless area.

Concerns expressed by residents of the general area (Tenakee Springs, Angoon, Sitka, and Hoonah) relate primarily to subsistence uses and commercial fishing as affected by timber harvest or to timber harvest that may be eliminated by the creation of a wilderness, therefore, affecting jobs.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. The Hoonah Sound Roadless Area was part of the Chichagof Wilderness Area proposed in HR 987. The north part of the area was designated permanent LUD II status under the 1990 Tongass Timber Reform Act. In 2001, HR 2908 proposed that this area remain in permanent LUD II status. The south portion of the area was identified as a proposed wilderness addition. The drainage flowing into Deep Bay was identified for protection as a Wild and Scenic River.

(c) Public Input During Forest Plan Revisions and Appeals: This area was specifically addressed in public input received during the Forest Plan revision and appeal. Commenters identified Deep Bay, Poison Cove, and Ushk Bay as areas meriting special protection that should receive LUD II or similar protection. Commenters also identified Management Area (MA) C39, which is wholly located within this roadless area, and MA C40, partially located within this area, as areas where there should be no further logging until future tourism resources are assessed. Timber industry representatives, in contrast, identified MAs 39 and 40 as areas that should be in timber production, except for a Modified Landscape buffer along Peril Strait. In 1996, the AVA proposed the following developments for the Ushk Bay area: a backcountry recreation lodging for 100 persons, hut-to-hut hiking/kayaking/canoeing for 25 persons, day-use recreation with a 150 person capacity, and day boat docks for 50 persons.

Parts of the area were also specifically identified in four separate appeals. The appeal filed by the Southeast Alaska Conservation Council (SEACC) expressed concern about the LUD designations applied to Poison Cove, Deep Bay, and Ushk Bay, which they identify as part of the Chichagof Wilderness designated in the 1989 house-passed version of HR 987. They noted that only shoreline patches and a narrow band around Deep Bay were protected under the revised Tongass Plan.

The appeal filed by the Sitka Conservation Society (SCS) objected to the inclusion of Ushk Bay and Poison Cove in the "timber base." They identified these places as areas with high value for wildlife habitat, community recreation and subsistence, tourism, and traditional culture and requested that these areas be removed from the timber base and designated as old-growth habitat. This appeal also noted that the entire Ushk Bay/Poison Cover area should be designated as old-growth habitat due to the larger patch sizes of contiguous old-growth forest, as well as its location adjacent to an extensively traveled waterway. They also noted that Deep Bay Creek should be given Wild and Scenic River designation.

The appeal filed by the Prince of Wales Conservation League identified south Chichagof Island as an area where the location and distribution of roadless reserves for brown bear habitat should be re-evaluated. The appeal filed by the Hoonah Indian Association et al. requested that logging not be permitted along the "stretch of lands and islands on both sides of the various narrows that span from Sitka Sound to Hoonah Sound" because the subsistence harvest of deer in this area "already exceeds the sustainable hunting level by a wide margin" and logging would exacerbate this situation.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area

Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: The proposed Ushk Bay Timber Sale(s) project is located within the Hoonah Sound Roadless Area. The FEIS for this project was published in 1994 (USDA Forest Service, 1994). A number of people commenting on this project noted that the Ushk Bay Project Area should have been designated as wilderness or a LUD II area. Commenters noted that Ushk Bay and Deep Bay were nominated for selected lands under the ANSCA Act. Commenters also noted that the wilderness setting of the Ushk Bay Project Area should be maintained. Concerns were also expressed about the potential impact of the proposed timber sale(s) on subsistence resources and use, wildlife, water quality/fisheries, marine resources, visual resources, and recreation. Commenters were also concerned about the effect that closure of the Sitka Pulp Mill would have on the proposed timber sale.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as one of the 13 roadless areas they considered to have outstanding fish and wildlife values. They supported the designation of Deep Bay Creek as a Wild and Scenic River. They recommended including the Pt. Adolphus/Mud Bay LUD II area within this conservation unit. They indicated that the important wildlife values provided by this area warrant management that ensures the long-term integrity of its habitats, ecosystem processes, and ecological functions.

In comments relative to the 1997 Forest Plan, the Governor of Alaska recommended that logging and construction of logging roads be avoided in important public interest areas such as Poison Cove/Ushk Bay (the southern portion of RA# 328). This comment was reiterated by the Governor in scoping comments regarding the SEIS and in comments by the Division of Governmental Coordination on the Draft SEIS.

Alaska Department of Fish and Game recommended permanent roadless status for the Poison Cove/Ushk Bay area. The Alaska Department of Fish and Game rated the Hoonah Sound roadless area as the second highest priority for protection in northern Southeast Alaska. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

SEACC recommended this area for permanent protection as a combination of wilderness and LUD II as outlined in Alternative 6. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Area 328 as adjacent to the West Chichagof Wilderness and recommended it for permanent protection in a combination of wilderness and LUD II, as described in Alternative 6. Audubon Alaska recommended that Poison Cove/Ushk Bay should be protected from logging and road building

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

The Sitka Tribe of Alaska supported Alternative 3 Wilderness Land Use Designation for the Ushk Bay, Poison Cove, and Deep Bay area.

Many commenters recommended protection for the Poison Cove, Ushk Bay, and Deep Bay areas or for the entire area. One wanted progressive logging to take place in the area because of the planning investment.

(2) Nearby Roadless and Wilderness Areas and Uses: The area is bordered to the north and west by the West Chichagof-Yakobi Wilderness. The Admiralty Island National Monument-Kootznoowoo Wilderness is located approximately 32 miles east of the area. The South Baranof Wilderness is located 35 miles south.

Adjacent roadless areas are the North Kruzof (#326) (located southwest across Peril Strait), North Baranof (#330) (east across Peril Strait), and Chichagof (#311) (north across Hoonah Sound) Roadless Areas. These roadless areas were generally assigned to similar LUDs as the Hoonah Sound Roadless Area. The north portion of the North Kruzof Roadless Area was assigned to Old-growth Habitat. The shoreline of the North Baranof Roadless Area directly across Peril Strait from the Hoonah Roadless Area was assigned to the Scenic Viewshed and Old-growth Habitat LUDs. The shoreline of the Chichagof Roadless Area, directly across Hoonah Sound from the Hoonah Sound Roadless Area, was allocated to the LUD II, Scenic Viewshed, and Old-growth Habitat LUDs

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	65	117
Sitka (Pop. 8,835)	25	30
Hoonah (Pop. 860)	30	95
Angoon (Pop. 572)	35	40

The closest Alaska Marine Highway terminals are at Angoon, Tenakee Springs, Hoonah, and Sitka. The nearest commercial airline service is available in Sitka.

(4) Relative Contribution to the National Wilderness Preservation System: The Hoonah Sound Roadless Area is located mostly on Chichagof Island. The West Chichagof-Yakobi Wilderness borders the area to the north and west. Hoonah Sound and Peril Strait border the area to the east and south, respectively. The area also includes Moser and Emmons Islands, which are separated from the Chichagof Island portion of the area by the South Arm of Hoonah Sound. A small peninsula just north of Moser Island, adjacent to the West Chichagof-Yakobi Wilderness is also part of this area. The topography is characterized by flat river valleys surrounded by mountains. Terrain relief ranges from sea level to more than 2,500 feet in elevation at Pinnacle Peak. There are numerous small lakes, mostly above 1,000 feet in elevation, scattered about the area.

The area is unmodified except for some older beach logging areas along the shoreline. The natural integrity and apparent naturalness is rated as very high and high. The opportunities for solitude and primitive recreation are outstanding for the area.

The Hoonah Sound Roadless Area has moderate scenic quality; approximately 13 percent of the landscape is considered distinctive from a scenery standpoint. There is a small area of karst development near Pinnacle Peak and the area has known cultural resources. There are no other known outstanding or unique values or features in the area.

The roadless area includes about 11,310 acres of high-volume, old-growth forest. Of these acres, approximately 1,542 are mapped as high-volume, coarse-canopy old growth.

The Hoonah Sound Roadless Area is classified as being in the East Chichagof Island Province and makes up about 9 percent of the province. It is one of 12 inventoried roadless areas that are found in the province that collectively make up about 72 percent of the province. Approximately 79 percent of the province is unroaded. The province contains the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness, which make up 6 percent of the province. The province also includes all or portions of three LUD II areas which make up approximately 25 percent of the province

The Hoonah Sound Roadless Area lies completely within the Baranof-Chichagof Fjordlands Ecological Section. This portion represents 5 percent of the entire ecological section, which is well represented in existing wilderness (28 percent) and other non-development LUDs (35 percent) with an additional 13 percent in LUD II.

The majority of this roadless area (92 percent) is located within the Ushk-Patterson Bay Granitics Ecological Subsection. This portion of the roadless area represents 78 percent of the entire ecological subsection within the Tongass National Forest boundary, and is well represented in LUD II (43 percent) with an additional 19 percent in existing wilderness and 6 percent in other non-development LUDs. The West Chichagof Complex Ecological

Subsection represents 8 percent of the Hoonah Sound Roadless Area. This portion of the roadless area represents 6 percent of the entire ecological subsection within the Tongass National Forest boundary, and is well represented in existing wilderness (94 percent) with an additional 6 percent in LUD II. Less than 1 percent of this roadless area is located within the North Baranof Complex Ecological Subsection. This portion represents less than 0.1 percent of the entire ecological subsection, which is well represented in other non-development LUDs (36 percent).

The Hoonah Sound Roadless Area was rated 25 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 12th from the highest (along with 12 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for designating the area as wilderness. Designation would make a large addition to the nearby West Chichagof-Yakobi Wilderness. The small area of karst and the cultural resource sites would be included in the wilderness. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be high.

V. Environmental Consequences

The Hoonah Sound Roadless Area would be managed under the existing Forest Plan if Alternatives 1 or 4 are implemented. Approximately 62 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 38 percent of the roadless area. The land in the development LUDs provides an estimated 2,226 acres that are suitable for timber production (5 percent of the suitable acres on the Sitka Ranger District). Approximately 39 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 2,972 acres of land identified as a mineral activity tract having a low potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains 10,735 acres of undiscovered locatable mineral resources; all of these acres are considered to have low potential for development. The values associated with the natural settings of the roadless area could be affected by developments in the non-LUD II area allowed by the Forest Plan. The high cultural, karst and most scenic values are protected by the Forest Plan.

Under Alternative 2, a 53,667-acre portion of the roadless area currently in existing LUD II would be converted to Recommended Wilderness. This would not affect timber sale projects because this area is currently allocated to a non-development LUD. The area suitable for timber production would not change from Alternative 1. The potential for other development, including recreation, mineral, and special uses, could be restricted in the area converted to Recommend Wilderness. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area inside the existing LUD II area would continue to receive long-term protection if designated wilderness.

Under Alternatives 3 and 6, all lands not currently in existing LUD II would be converted to Recommended Wilderness. Timber sale projects would not be allowed, and the potential for other development, including recreation, special uses and mineral, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area outside of existing LUD II areas, including cultural, karst, and scenic values, would be provided long-term protection if designated wilderness. The values associated with the natural settings inside the existing LUD II area would continue to receive long-term protection.

With Alternatives 5, 7 and 8, the entire roadless area would be converted to Recommended Wilderness. Timber sale projects would not be allowed, and the potential for other development, including recreation, special uses, and mineral, could be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including cultural, karst, and scenic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 328 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness		53,667	43,662		97,329	43,662	97,329	97,329
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	6,430	6,430		6,430				
Semi-remote Recreation	115	115		115				
Recommended LUD II								
LUD II	53,667		53,667	53,667		53,667		
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	3,191	3,191		3,191				
Modified Landscape	1,197	1,197		1,197				
Timber production	32,729	32,729		32,729				
TOTAL	**97,329**	**97,329**	**97,329**	**97,329**	**97,329**	**97,329**	**97,329**	**97,329**
Suitable Timber Lands	2,226	2,226	**0**	2,226	**0**	**0**	**0**	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: South Kruzof (329)

ACRES (NFS): 55,726

BIOGEOGRAPHIC PROVINCE: West Baranof Island

ECOLOGICAL SECTION: Baranof-Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 22

I. Overview and Description

(1) Location and Access: This area is located on the southern half of Kruzof Island. It is bordered on the west by the open Pacific Ocean, and on the south and east by Sitka Sound. The area is bordered to the north by an area developed for timber management that extends the width of the island from Shelikof Bay to Mud Bay and a small part of Krestof Sound. The area also includes a number of small offshore islands and rocks. Sitka, the closest larger community with Alaska Marine Highway service, is located approximately 10 miles east across Sitka Sound from the area. Juneau is approximately 90 air miles northeast of the South Kruzof area.

The primary form of access to the area is by saltwater along all four coastlines. However, the west and south coasts have poor boat anchorages and frequent rough water. The east coast is much more sheltered. The interior of the area may be accessed via Mount Edgecumbe Trail (#520), a 6.7-mile-long National Forest System Trail that extends west from Freds Creek Cabin on the east coast to the summit of the Mount Edgecumbe crater. There are two survival shelters associated with the trail at about mile post 4.2. There is also an old overgrown road running along the shoreline by Shoals Point at the southeast corner of the area. This roaded area is excluded from the boundaries of the roadless area, but provides general access along the south border of the area. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Goldschmidt and Haas (1946) identified a former village and a former smokehouse or cabin in this area. Use of the area has been primarily for hunting, fishing, recreation, and temporary occupancy. This area saw considerable military activity during World War II. An army camp was established on Shoals Point on Kruzof Island. This camp included miles of road and many buildings. Although this roaded area is excluded from the South Kruzof Roadless Area, much evidence of the related activities remains within the boundaries of the area. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found.

(3) Geography and Topography: The area is generally characterized by a large gently sloping shield volcano dominated by the volcanic cone named Mount Edgecumbe. This is the result of a northeast trending line of volcanic vents across the island that erupted to produce the Mount Edgecumbe volcanic field covering about 100 square miles. Although the 3,200 foot Mount Edgecumbe and the 2,400 foot collapsed caldera, Crater Ridge, dominate the Island, smaller cinder cones are scattered throughout the area.

The Mount Edgecumbe volcanic field is a geologically recent feature with major ash eruption about 10,000 years ago, and the volcano only inactive the last 200 years. The coastline is relatively smooth. It is not deeply scalloped or indented as is typical of the glacially carved areas elsewhere in the region. Semi-submerged rocks, reefs, and rock bluffs dominate the coast, and the shoreline is characterized by forested lowlands with a relatively gentle slope. Streams are generally short and flow directly to saltwater.

The area includes approximately 58 miles of shoreline along saltwater, as well as 1,525 acres of alpine, 45 acres of ice and snow, and 139 acres of rock. These are 102 acres of islands and islets located along the coastline.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the West Baranof Island Biogeographic Province. Topographically, Baranof Island is the most rugged of all the islands in Southeast Alaska. The outer coast of this province is dotted with hundreds of small islands. All forest plant associations except those in the Western red cedar series and those found around large mainland rivers occur in this province.

Ecological Section/Subsection. The South Kruzof Roadless Area is contained entirely within the Baranof-Chichagof Fjordlands Ecological Section (M247B). This area is represented by one ecological subsection (see table below). The Mount Edgecumbe Volcanics Ecological Subsection contains a rare landscape of scoria cones and lava fields that form along a transform fault. The symmetrical scoria cones, found on the southern portion of Kruzof Island, create moderate to high gradient stream channels in a radial pattern. This feature is unique to thin subsection in all of Southeast Alaska. The slopes of the cones produce well-drained soils and support productive hemlock-spruce forests. On the low-relief lava field, wet organic soils support lower productive forests ranging from hemlock-cedar to lodgepole pine-cedar peatlands (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Baranof-Chichagof Fjordlands	Mount Edgecumbe Volcanics	100%

(b) Soils: Shallow mineral soils with good drainage can be found on steeper slopes due to rapid loss of material by erosion and efficient rainwater runoff. Deep, well-drained soils commonly occur below the shallow soils on the gentler slopes where transported soil materials have collected. Poorly drained soils are found associated with low relief and impermeable subsurface layers. Deep organic soils (muskegs) tend to form in locations with poor drainage. In riparian areas, soil zones tend to contain sand and gravels as a result of flood deposition. Much of the area soils are influenced by ash.

(c) Vegetation: The vegetation of this roadless area consists primarily of typical spruce-hemlock forests. Western hemlock-Sitka spruce dominate the overstory, while the understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Muskegs, covering approximately 11,647 acres, are abundant within this area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. These areas, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low elevation timber stands where drainage is restricted. Trees within the muskegs are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar.

At elevations generally above 2,000 feet, alpine plant communities (mapped as 1,525 acres) are characterized by low shrubs, grasses, and sedges. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 41,489 acres mapped as forest land, of which 17,164 acres or 41 percent are mapped as productive old-growth forest. Of the productive old growth, 3,366 acres or 20 percent are mapped as high-volume old-growth forest. The productive old growth includes about 173 acres of high - volume, coarse-canopy old growth. There are also 41 acres of second growth where beach harvest has occurred in the past.

(d) Fish Resources: Freds Creek is a good salmon producer in this area, providing habitat for pink, coho, and chum salmon, steelhead, and cutthroat trout. However, Freds Creek has barrier falls located only

a mile or two upstream of its mouth, and also drains directly into saltwater with very little estuary area. The Anadromous Waters Catalogue (ADF&G, 2000) also identifies Cascade Creek and 17 unnamed streams as fish-bearing streams that provide habitat for coho, pink, and chum salmon. Two relatively large streams empty into Port Krestof and the associated large estuary, and both streams and the estuary support important fish runs. Port Krestof and the mouth of these streams are located within a State marine park. Most of the length of each stream occurs within National Forest System lands. The stream entering from the south produces pink, chum, and coho salmon and Dolly Varden char. A fishpass was constructed in 1996 on the tidewater falls of Lava Falls Creek, entering the southwest corner of Port Krestof. This stream now supports a coho salmon run.

(e) Wildlife Resources: There are many varied wildlife resources in this roadless area. Bird and waterfowl rearing and nesting areas are abundant in this area. Generally, the area provides good habitat for Sitka black-tailed deer and brown bear. Bald eagle habitat, including nesting and roosting trees, is found in this roadless area along the shorelines. MacDonald and Cook (1999) do not list black bear, moose, wolves, or mountain goats as inhabitants of Kruzof Island. Sea otters are prevalent along much of the shoreline adjacent to this roadless area.

(5) Management Direction and Current Uses: This area was allocated to three Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These three LUDs are Modified Landscape, Special Interest Area, and Semi-Remote Recreation.

LUD	Acres
Modified Landscape	4,826
Special Interest Area	48,359
Semi-Remote Recreation	2,541

Approximately 9 percent of the roadless area was allocated to one development LUD, Modified Landscape. The Modified Landscape LUD is located in the Shell Mountain area. Most of this area was allocated to a non-development LUD (Special Interest Area, Semi-Remote Recreation). The majority of this roadless area, approximately 87 percent, was allocated to the Mount Edgecumbe Special Interest Area LUD to recognize its geologic value. Land around Point Mary and Port Krestof was allocated to the Semi-Remote Recreation LUD, which accounts for approximately five percent of the roadless area. The small islands associated with the roadless area are also allocated to the Semi-Remote Recreation LUD.

Recreational use of the area is primarily for hunting and fishing, and enjoying the scenery. This use is scattered across the area, with the usual concentrations near lakes, streams, and shorelines. There are two public recreation cabins, Brents Beach and Freds Creek, located along the east shoreline of the area. The Mount Edgecumbe Trail extends west from Freds Creek Cabin to the summit of the Mount Edgecumbe crater. Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified the VCUs that comprise this area as subsistence use areas with a high and moderate to high sensitivity to disturbance.

(6) Appearance (Apparent Naturalness): A vast majority of the area is considered unmodified except for the evidence of current and historic use of the area. This includes the Freds Creek and Brents Beach Recreation Cabins, the Mount Edgecumbe Trail, and World War II developments along the southeast coast. This evidence although locally significant, has a very low overall effect on the natural integrity of the area. Both the relative size of the developments and their location along the shoreline contribute to this low impact. The area generally appears to be in an unmodified natural condition when viewed from the major water travel routes in the area.

(7) Surroundings (External Influences): The area is bordered by salt water on three sides. As a result, external influences on those sides are limited to the sights and sounds of motorized boats. The sights and sounds of airplanes passing overhead are also evident within the area. The area is on the primary flight path for jets arriving or departing Sitka's airport. There is little vegetative or topographic screening in the area and the city of Sitka, located approximately 10 miles east across Sitka Sound, may be visible from some locations on the east side of the area. The northern boundary adjoins a developed area. This development has had a moderate impact on the northern part of the roadless area.

(8) Attractions and Features of Special Interest: The major attractions and features of special interest in the South Kruzof Roadless Area are the volcanic landforms and an area under the unique hydrological influence of volcanic ash soils. The Mount Edgecumbe Special Interest Area includes the largest volcanic landform including Mount Edgecumbe, with Crater Ridge and Shell Mountain complementing the view. Mount Edgecumbe erupted about 10,000 years ago and deposited volcanic ash as far east as Sitkoh Bay on Chichagof Island. The volcanic activity on Kruzof Island is of particular interest as it is related to plate movements and the complex process of terrain accretion.

The area contains six inventoried recreation places, which cover 4,636 acres, or 8 percent of the roadless area. The natural features of the area, the scenery, and the opportunity to see wildlife are all considered attractions. High quality fishing opportunities in the streams and lakes are attractions. There is one National Forest System Trail in this roadless area and two public recreation cabins.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of the area are unchanged with the exception of the land surrounding Port Krestof, which is now state-owned and part of the Magoun Islands State Marine park. Several small areas along the developed boundaries have been excluded between the Draft and Final SEIS to improve the potential for manageability of the roadless area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified except for the evidence of current and historic use of the area. This includes the Freds Creek and Brents Beach Recreation Cabins, the Mount Edgecumbe Trail, and World War II developments along the southeastern coast. These impacts although locally evident, have a very low overall effect on the natural integrity and apparent naturalness of the area. Both the relative size of the developments and their location along the shoreline contribute to this low impact. The effects of human influences on long-term ecological processes within the area are immeasurable. Overall, the area's appearance is suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a relatively high opportunity for solitude and primitive recreation within the area. The limited amount of topographic screening and only moderate to high vegetative screening somewhat reduces opportunities for solitude. The sight or sound of airplanes overhead and boats along the coastlines can occasionally intrude on a visitor's solitude. The area is on the primary flight path for jets arriving or departing Sitka's airport. Although recreation use is concentrated near the two recreation cabins, it cannot be considered heavy. Recreational use of the remainder of the area is relatively limited and dispersed, so that encounters with other visitors are unlikely. There is some motorized recreational use occurring on the road system and in some unroaded areas along the northern boundary of the area that can be heard within the roadless area.

The area provides a moderate opportunity for primitive recreation as a result of its size, vegetative screening, and physical challenges. This area has a highly unique topography composed of a series of volcanic landforms surrounded by a gently sloping landscape terminating at the sea. The unique landforms combine with the diverse vegetation to offer a setting capable of providing primitive recreation opportunities. There are small ponds, streams, bays, and a varied coastline that contribute to these opportunities.

Outfitter/guide use was reported at five locations along the west shoreline of this area in 1999. Twenty-six groups with a total of 217 clients were reported visiting this area. Reported uses included camping, brown bear hunting, and hiking. Mud Bay and the Freds Creek were the most popular locations accounting for 79 and 78 clients, respectively.

The area provides primarily primitive and semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	27,105	49%
Semi-Primitive Non-Motorized (SPNM)	24,590	44%
Semi-Primitive Motorized (SPM)	824	1%
Roaded Natural (RN)	2,328	4%
Roaded Modified (RM)	811	1%

The area contains six inventoried recreation places, which cover 4,636acres, or 8 percent of the roadless area.

ROS Class	# of Rec. Places	Total Acres
P	1	599
SPNM	1	1,618
SPM	0	0
RN	3	2,328
RM	1	90

One National Forest System Trail with two associated shelters, and two public recreation cabins are located in the area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the South Kruzof Roadless Area was 19 out of 28 possible points. A smaller portion of the area was rated separately in 1989 and received a score of 20. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 22.

(4) Ecologic and Geologic Values: This area, located on the southern half of Kruzof Island, is bordered to the north by developed areas that extend the width of the island from Shelikof Bay to Mud Bay. The Mount Edgecumbe Special Interest Area offers unique opportunities to view or study volcanic activity, plate movements and the complex process of terrain accretion. The roadless area is not part of a larger unroaded land area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified one VCU that covers most of the area, South Kruzof (308), as a primary salmon producer. No VCUs were identified as primary sport fish producers.

Freds Creek is a good salmon producer in this area, providing habitat for pink, coho, and chum salmon, steelhead, and cutthroat trout. However, Freds Creek has a barrier falls located only a mile or two upstream of its mouth and also drains directly into saltwater with very little estuary area. The Anadromous Waters Catalogue (ADF&G, 2000) also identifies Cascade Creek and 17 unnamed streams as fish-bearing streams that provide habitat for coho, pink, and chum salmon. Two relatively large streams empty into Port Krestof and the associated large estuary, and both streams and the estuary support important fish runs. Port Krestof and the mouth of these streams are located within a State marine park. Most of the length of each stream occurs within National Forest System lands. The stream entering from the south produces pink, chum, and coho salmon and Dolly Varden char. A fishpass was constructed in 1996 on the tidewater falls of Lava Falls Creek, entering the southwest corner of Port Krestof. This stream now supports a coho salmon run. A fishpass was completed on Lava Falls Creek in 1996.

(b) Wildlife Resources: There are many varied wildlife resources in this roadless area. Bird and waterfowl rearing and nesting areas are abundant in this area. Generally, the area provides good habitat for Sitka black-tailed deer and brown bear. Bald eagle habitat, including nesting and roosting trees, is found in this roadless area along the shorelines. MacDonald and Cook (1999) do not list black bear, moose, wolves, or mountain goats as inhabitants of Kruzof Island. Sea otters are common.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Peale's peregrine falcons pass through the forests during their spring and fall migration flights. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, 12 sensitive plant species are known or suspected to occur in the Sitka Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are no glaciers in this area. The most significant geologic features in this area are volcanic landforms. The Mount Edgecumbe Special Interest Area includes a 3,200 foot volcano, Mount Edgecumbe, and the 2,400 foot collapsed caldera, Crater Ridge, which dominate the island, and smaller cinder cones are scattered throughout the area. Freds Creek drainage is geologically interesting because of ash canyons and cliffs, lava falls, and unique basalt bedrock control channels.

(5) Scientific and Educational Values: The most significant features of the area are volcanic landforms and the ecological effects of the volcanic activities. The Crater Ridge-Freds Creek area was one of 30 potential Research Natural Areas (RNAs) recommended by the RNA Steering Committee as part of the Tongass Land Management Plan Revision planning process. Six of these recommended RNAs were considered for designation. These six areas did not include the potential Crater Ridge-Freds Creek RNA because this designation would be incompatible with the cabin, trail, and recreation uses in the area. The area was instead designated as the Mount Edgecumbe Geological Area (Special Interest Area) in the Forest Plan in recognition of its special geological attributes and high recreation (and tourism) use. It offers unique opportunities to view or study volcanic activity, particularly as it is related to plate movements and the complex process of terrain accretion and subsequent crustal movements.

(6) Scenic Values: The visual character type of this roadless area is classified as Admiralty-Chichagof. Landforms in this roadless area are generally rounded. Rocky islands, reef, and rock bluffs are found frequently on the outer coast. Rocky shorelines interspersed with small gravel beaches are found throughout the character type. Streams are generally short and swift on the west side of the roadless area. The streams are clear and many offer considerable visual variety, e.g., pools, rapids, cascades, riffles, falls, and meandering forms. Saltwater bays and estuaries are numerous and exhibit much variety, from small sheltered coves to large exposed forms. Often dramatic high-energy seas occur on the outer coast. The South Kruzof Roadless Area at the southern end of Kruzof Island is a poor example of this visual character class as it is the only area within the class that is of volcanic origin. It only has some of the features described and the features are limited or poorly represented.

Most of the area appears unmodified, except for some historic and current use. This includes the Freds Creek and Brents Beach Recreation Cabins, the Mount Edgecumbe Trail and associated shelter, and World War II developments along the southeastern coast. This evidence although locally evident, has a very low overall effect on the natural integrity of the area. Both the relative size of the developments and their location along the shoreline contribute to that low impact. The area generally appears to be in an unmodified natural condition when viewed from the major water travel routes in the area.

A number of Visual Priority Routes and Use Areas identified by the Forest Plan are within or adjacent to the area. Identified Visual Priority Routes include Sitka Point to Shelikof Bay and Gilmer Bay, Sitka Point to Hayward Strait, Hayward Strait to Peril Strait, and Southeast Kruzof Island (small boat routes). Use Areas include: Magoun Islands

(State Marine Park); Sitka Point to Beaver Point (saltwater use area); Magoun Islands, Kruzof Island, east shore from Magoun Islands to Sitka Point, and Mount Edgecumbe (dispersed recreation areas); Freds Creek and Brents Beach (public recreation cabins); and Mount Edgecumbe (hiking trail).

Approximately 71 percent of this roadless area was inventoried Variety Class A (possessing landscape diversity unique for the character type). Approximately 29 percent of the area was rated as Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, approximately 97 percent, is inventoried as Existing Visual Condition (EVC) I; these areas appear to be untouched by human activity. Approximately 3 percent is in EVC V where changes in the landscape are obvious to the average person and the changes appear to be major disturbances.

(7) Social, Cultural, and Historical Values: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Goldschmidt and Haas (1946) identified a former village and a former smokehouse or cabin in the area. Use of the area has been primarily for hunting, fishing, recreation, and temporary occupancy. This area saw considerable military activity during World War II. An army camp was established on Shoals Point on Kruzof Island. This camp included miles of road and many buildings. Although this roaded area is excluded from the South Kruzof Roadless Area, much evidence of the related activities remains within the boundaries of the area. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found. Sitka, the closest larger community, is located approximately 10 miles east across Sitka Sound from the area.

Recreational use of the area is primarily for hunting and fishing, and enjoying the scenery. This use is scattered across the area, with the usual concentrations near lakes, streams, and shorelines. There are two public recreation cabins, Brents Beach and Freds Creek, located along the east shoreline of the area. The Mount Edgecumbe Trail extends west from Freds Creek Cabin to the summit of the Mount Edgecumbe crater. Outfitter/guide use was reported at five locations along the west shoreline of this area in 1999. Twenty-six groups with a total of 217 clients were reported visiting the area. Reported uses included camping, brown bear hunting, and hiking. Mud Bay and the Freds Creek were the most popular locations accounting for 79 and 78 clients, respectively. Higher uses are being experienced now.

Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment identified only VCUs 307 and 309, a small, northern part of the roadless area, as subsistence use areas with a high sensitivity to disturbance. VCU 309 was also listed among the VCUs with the highest community use value (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The South Kruzof Roadless Area is generally well defined by topographic features. The boundaries formed by Shelikof Bay, the Pacific Ocean, Sitka Sound, Hayward Strait, and Krestof Sound are easily described and recognized. Only the northern boundary, which is the result of developments, is poorly defined. It follows the edge of the development across terrain that is relatively gentle, without distinguishing topographic features. The watersheds, which have developments in them, could be excluded from the northern portion of the roadless area and it would improve the manageability of that boundary. The feasibility of management of this area as wilderness or in an unroaded condition is good, as there are no significant motorized access or other current nonconforming uses.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas

(1) Recreation, Including Tourism Potential: The unique volcanic features and vegetation, and the attractive scenery of this area provide opportunities for increasing dispersed recreation. Additional trails and cabins or shelters are possible. The Sitka Trail Plan Committee, a multi-agency task group, including representatives of the City and Borough of Sitka, USDA Forest Service, and National Park Service, among others, conducted a survey of residents of Sitka and outlying communities in 1999 to identify potential new trails in the Sitka area. As a result of this process, the Committee identified a potential Kruzof Island Coastal Trail that would extend from Shoals Point to Mud Bay. Whenever possible the trail would be located on the beach.

In 1996, the Alaska Visitors Association (AVA) proposed the following recreation developments for South Kruzof: hut-to-hut hiking for 30 persons/day, Mount Edgecumbe flight-seeing landings for 100 persons/day, other flight-seeing landings for 25 persons/day, day-use recreation for 100 persons/day, an overnight wildlife observatory for 30 persons/day, a day-use wildlife observatory for 50 persons/day, day-use recreation for 100 persons/day, a 3,000-cubic foot equipment storage facility, and day-boat docks for 50 persons/day.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: A fishpass was completed on Lava Falls Creek in 1996. No other fish enhancement projects are planned at this time.

(4) Wildlife Resources: No wildlife habitat enhancement project are planned in the area at this time.

(5) Timber Resources: There are 17,164 acres mapped as productive old growth in the roadless area and 41 acres of second growth resulting from beach harvest. Of these acres, 10,825 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 885 acres or 2 percent of this roadless area are estimated to be suitable for timber production. Approximately 419 of the suitable acres are mapped as high-volume old growth and 47 are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area is dependent on higher market values. Designating this area wilderness would not affect potential timber harvest in adjacent areas.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present in the area. There are no known epidemic disease occurrences.

(7) Minerals: There are no known claims in this area. This area contains 982 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have low potential for development.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area. There is a need for additional road access to timbered lands in the Modified Landscape LUD.

(9) Water Availability and Use: There are two recreation cabins that create water demand in the area. There are no existing or planned hydroelectric or domestic water projects in the area.

(10) Areas of Scientific Interest: The most significant features of scientific interest are volcanic landforms and the ecological effects of the volcanic activities in the Mount Edgecumbe Special Interest Area. The area has been the subject of intensive study both from the standpoint of the structural development of the soils and ecosystem succession, and for geologic studies. Management as a Wilderness Area may restrict the research activities.

Crater Ridge is a caldera (collapsed volcanic summit) on a subsidiary volcanic cone approximately 2 miles northeast of Mount Edgecumbe. Crater Ridge is a composite dome (made up of lava flows alternating with ash) and stands about 1,500 feet in elevation. Freds Creek drains the east slope of the crater summit. This watershed from summit to tidewater would allow studies of the influence of recent (approximately 10,000 years ago) volcanic ash on stream flow and water chemistry.

Important forest types in the area include western hemlock and riparian Sitka spruce. Both are growing on special soils that may produce variants of the "typical" forest type. Small areas of western hemlock-Alaskan yellow-cedar and muskeg occur in the area. Several plant species have been identified in this area that are uncommon or at the edge of their range.

(11) Land Use Authorizations: Land use authorizations within the roadless area, primarily outfitter and guides, are expected to continue.

(12) Land Status: The area consists entirely of National Forest System lands.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Most use of the area is associated with recreational boating, hunting and fishing, and viewing the wildlife and scenery of the area.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the South Kruzof Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also proposed that Freds Creek be protected as a Wild and Scenic River. The roaded and logged area that borders this roadless area to the north was identified for protection as a Restoration Area.

(c) Public Input During Forest Plan Revisions and Appeals: This area was specifically addressed in public input received during the Forest Plan revision and appeal. Approximately 1,400 letters were received on the Draft Tongass Land Management Plan EIS in response to a National Wildlife Federation article, a Southeast Alaska Conservation Council (SEACC) newsletter, and Wilderness Society and Sierra Club articles. All of these sources listed specific areas for the public to include in their comments. Mount Edgecumbe was one of these areas, identified by most of the 1,400 writers for protection or Remote Recreation or Old Growth management prescriptions. The area was also identified by SEACC as one of a number of areas "meriting special management protection" for their outstanding wildlife, fisheries, hunting, fishing, subsistence, recreation, and tourism values. The Sitka Conservation Society (SCS) requested that all of Kruzof Island be assigned to Semi-Primitive Recreation. Other commenters requested that Kruzof Island/Mount Edgecumbe be developed for recreation and allow ATV use. Others requested that "multiple use management" continue in the area. Timber industry comments stated that Management Area (MA) C45, which encompasses the South Kruzof Roadless Area, should be mostly in Semi-Primitive Recreation, but with some roads for access and salvage. Another commenter requested that this and other areas be managed for a local wood products industry. In 1996, the AVA proposed recreation developments for the South Kruzof Roadless Area. These proposals are outlined in Section III.(1) of this description.

Freds Creek was specifically identified in the Forest Plan appeal filed by the SCS who requested that it be given wild and scenic river designation because it is a rare resource that will be more valuable over time than logging the same area would be.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area is not within the study area of any recently completed project-level EISs.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 329 for permanent protection as LUD II. SEACC recommended Roadless Areas 326, 327, and 329 on Kruzof Island to be permanently protected through designation as LUD II.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

Some thought the island contains valuable low-elevation forest that should be protected. A number of individuals felt this area should be protected.

(2) Nearby Roadless and Wilderness Areas and Uses: The nearest wilderness is the West Chichagof-Yakobi Wilderness that lies north of Salisbury Sound. Two other nearby wildernesses are the Admiralty National Monument Wilderness, which lies east of Chatham Strait, and the South Baranof Wilderness south of Sitka.

Nearby roadless areas include North Kruzof and Middle Kruzof, both on Kruzof Island, and Sitka Sound, which includes the islands east of Port Krestof and Whitestone Peninsula in Sitka Sound.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	90	150
Sitka (Pop. 8,835)	10	10
Hoonah (Pop. 860)	65	125
Angoon (Pop. 572)	45	70

The nearest stop on the Alaska Marine Highway is Sitka.

(4) Relative Contribution to the National Wilderness Preservation System: The South Kruzof Roadless Area is located on the southern half of Kruzof Island. It is bordered on the west by the open Pacific Ocean, and on the south and east by Sitka Sound. The area is bordered to the north by an area developed for timber management that extends the width of the island from Shelikof Bay to Mud Bay and a small part of Krestof Sound. The area also includes a number of small offshore islands and rocks. The roadless area is characterized by a large gently sloping shield volcano dominated by the volcanic cone named Mount Edgecumbe. This is the result of a northeast trending line of volcanic vents across the island that erupted to produce the Mount Edgecumbe volcanic field covering about 100 square miles. Although the 3,200-foot Mount Edgecumbe and the 2,400-foot collapsed caldera, Crater Ridge, dominate the Island, smaller cinder cones are scattered throughout the area. The Mount Edgecumbe volcanic field is a geologically recent feature with major ash eruption about 10,000 years ago, and the volcano has only been inactive the last 200 years. The coastline is relatively smooth. Semi-submerged rocks, reefs, and rock bluffs dominate the coast.

The area is unmodified except for the evidence of current and historic use. This includes the Freds Creek and Brents Beach public recreation cabins, the Mount Edgecumbe Trail and shelter, and World War II developments along the southeastern coast. Even with this evidence, the area has very high natural integrity and apparent naturalness. The opportunity for solitude and primitive recreation is relatively high.

The South Kruzof Roadless Area has unique scenery; approximately 71 percent of the landscape is considered distinctive from a scenery standpoint. The most significant features of the area are volcanic landforms and the ecological effects of the volcanic activities. The Mount Edgecumbe Special Interest Area offers unique opportunities to view or study volcanic activity, plate movements and the complex process of terrain accretion.

The roadless area includes about 3,366 acres of high-volume, old-growth forest. Of these acres, approximately 173 are mapped as high-volume, coarse-canopy old growth.

The South Kruzof Roadless Area is classified as being in the West Baranof Island Biogeographic Province and makes up about 7 percent of the province. It is one of eight inventoried roadless areas found within the province that make up about 62 percent of the province. The majority of the South Baranof Wilderness is also within this province and makes up approximately 29 percent of the province.

The South Kruzof Roadless Area lies completely within the Baranof-Chichagof Fjordlands Ecological Section. This portion represents 3 percent of the entire ecological section, which is well represented in existing wilderness (28 percent), LUD II (13 percent), and other non-development LUDs (35 percent).

This roadless area is located completely within the Mount Edgecumbe Volcanics Ecological Subsection. This portion represents 76 percent of the entire ecological subsection, which is well represented in non-development LUDs (75 percent).

The South Kruzof Roadless Area was rated 22 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 38th from the highest (along with eight other roadless areas) among the 109 Tongass inventoried roadless areas.

There is considerable local and national support for managing the roadless area in an unroaded condition, but there has been little support for designating the area as wilderness. Designation of the area would add Congressional protection to about 76 percent of the Mount Edgecumbe Volcanics Ecological Subsection, which currently contains no areas under long-term Congressional protection. Although the WARS score for the roadless area is not exceptionally high, designation would create a wilderness that has some unique values and features. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be high.

V. Environmental Consequences

The South Kruzof Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 91 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 9 percent of the roadless area. The land in the development LUDs includes an estimated 885 acres that are suitable for timber production (2 percent of the suitable acres on the Sitka Ranger District). Approximately 47 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 982 acres of undiscovered locatable mineral resources; all of these acres are considered to have low potential for development. The relatively high recreation (including outfitter and guides) use would continue and ongoing research activities would continue. The values associated with the natural settings of the roadless area are mostly protected by the Forest Plan, except they could be affected by developments that are allowed in the northern portion of the area. The high scenic and geologic values of the roadless area are protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting, most research activities, and recreation use and developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the scenic and geologic values, would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to about 76 percent of the Mount Edgecumbe Volcanics Ecological Subsection, which currently contains no areas under long-term Congressional protection.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed and the potential for other development, including recreation, mineral, and some research, could be significantly restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic and geologic values, would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to about 76 percent of the Mount Edgecumbe Volcanics Ecological Subsection, which currently contains no areas under long-term Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 329 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								55,726
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area	48,359	48,359	48,359	48,359	48,359		48,359	
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat								
Semi-remote Recreation	2,541	2,541	2,541	2,541	2,541		2,541	
Recommended LUD II						55,726		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	**4,826**	**4,826**	**4,826**	**4,826**	**4,826**		**4,826**	
Timber production								
TOTAL	55,726	55,726	55,726	55,726	55,726	55,726	55,726	55,726
Suitable Timber Lands	885	885	885	885	885	0	885	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: North Baranof (330)

ACRES (NFS): 324,317

BIOGEOGRAPHIC PROVINCE: East Baranof Island and West Baranof Island

ECOLOGICAL SECTION: Baranof-Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 25

I. Overview and Description

(1) Location and Access: The area is located on the north end of Baranof Island. It is bordered to the north by Peril Strait, to the east by Chatham Strait, and to the south by the South Baranof Wilderness. Kakul Narrows and Neva Strait border the area to the northwest. The Sitka Urban Roadless Area (#331) borders the area to the west. The area also includes Catherine Island on the northeast corner of Baranof Island and a number of offshore islands and rocks.

The North Baranof Roadless Area is part of a larger roadless land area that stretches the length of Baranof Island. This area consists of four roadless areas and the South Baranof Wilderness. The four roadless areas that comprise this larger area are North Baranof (#330), Sitka Urban (#331), Redoubt (#333), and Port Alexander (#334).

The city of Sitka is located approximately 10 miles west and Juneau is approximately 65 miles northeast of the area. There are two primary forms of access to the North Baranof Roadless Area. The first is by floatplane, with Sitka the most frequent place of origin. The second access is by saltwater along all coastlines. Due to the numerous bays and fiords that provide sheltered anchorage for boats, and the proximity to Sitka, access to the area is generally good.

Areas developed for timber management border and extend into the area along drainages in a number of locations, providing motorized access to the edge of the area, including in the vicinity of Fish Bay, Rodman Bay, Saook Bay, and Catherine Island. The roads that extend into the area are excluded from the roadless area itself.

There are three National Forest System Trails within the area: the Lake Eva-Hanus Bay Trail, the Sadie Lake Trail, and the Warm Springs Bay Trail. The Lake Eva-Hanus Bay Trail, 2.9 miles in length, extends from Hanus Bay to the southwest end of Lake Eva. The Sadie Lake Trail, 0.8 miles in length, extends from near the mouth of Baranof Lake to the south end of Sadie Lake. The Warm Springs Bay Trail, 0.5 miles in length, begins at the Baranof Warm Springs and ends at the east end of Baranof Lake.

(2) History: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Historic use of the area includes sawmills, salmon and herring salteries, fisheries enhancement facilities, and a variety of other occupancies and settlements. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found. Goldschmidt and Haas (1946) identified aboriginal use (including hunting/trapping, berrying, salmon, and shellfish) and structures along the shoreline of the area, including a fort, numerous smokehouse/cabin sites, and a number of commercial fish traps.

(3) Geography and Topography: The area is generally characterized as an irregular, rugged chain of mountains 2,000 to 5,300 feet in elevation with a steep eastern slope and a more gentle slope in the northern half of the area. The eastern coast is deeply indented with fiords while the northern shore is characterized by numerous large bays. Numerous rocky crests and sharp ridges are found at higher elevations. Snow can be seen all year round on higher summits with a few cirque glaciers and small permanent ice fields in the southern part of the area.

Streams are generally short and flow directly to saltwater with the longest about 10 miles long. Cascades are common and lakes are plentiful, especially in the southern portion of the area. The largest lake is Baranof Lake just west of the community of Baranof Warm Springs. It stretches approximately 3 miles and lies at an elevation of 145 feet.

There are 230 miles of shoreline along saltwater. A large portion of the area consists of alpine tundra, ice, snow, and rock. This includes 24,405 acres of alpine tundra, 13,439 acres of ice and snow, and 64,183 acres of rock. There are 16,009 acres of islands, including Catherine Island, located along the coastline and 3,480 acres of freshwater lakes in the area. Large lakes in the area include Hidden Falls, Carbon and Baranof Lakes, and Lake Eva.

(4) Ecosystem: Clear River Special Interest Area contains spruce and hemlock habitat with black cottonwood/willow communities and an estuarine environment. Both are unique to the area.

(a) Classification: Biogeographic Province. The area is classified as being in the East Baranof Island and West Baranof Island Biogeographic Provinces. Topographically, Baranof Island is the most rugged of all the islands in Southeast Alaska. Mountain glaciers occur along the divide between east and west Baranof. The southern half of this province is highly dissected by steep-sided fiords. The outer coast is dotted with hundreds of small islands. Plant associations on Eastern Baranof are similar to much of the mainland due to the steep topography and cold environment. All forest plant associations except those in the Western redcedar series and those found around large mainland rivers occur in the West Baranof Island Biogeographic Province.

Ecological Section/Subsection. The North Baranof Roadless Area is contained entirely within the Baranof-Chichagof Fjordlands Ecological Section (M247B). This area is represented by four ecological subsections (see table below). The Central Baranof Metasediments Ecological Subsection, which represents about half of the roadless area, has the tallest peaks, roughest terrain, and greatest extension of glaciers, icefields, and snowfields of all islands in Southeast Alaska. U-shaped valleys with precipitous walls are characteristic of this subsection. The bedrock is a mixture of metasedimentary, sedimentary, and granitic rocks. Almost half of this ecological subsection is alpine and approximately 10 percent land cover is hemlock-spruce forest where alluvial fans are present. The North Baranof Complex Ecological Subsection, which represents about one-third of the roadless area, consists primarily of low-grade metamorphic rocks such as greenschist, phyllites, and greenstone. There are few permanent snowfields but no glaciers or icefields present. Glacial till deposits are abundant and support hemlock-spruce forests from shoreline to mid-elevation slopes. Above that, alpine communities dominate. The Sitka Sound Complex Ecological Subsection is relatively low in elevation and there are no glaciers, although there are some permanent snowfields. Mixed conifer and hemlock-spruce forests dominate the lower elevations and shorelines, and forested wetlands of lodgepole pine and mixed conifer are abundant (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Baranof-Chichagof Fjordlands	Central Baranof Metasediments	49%
	North Baranof Complex	31%
	Sitka Sound Complex	15%
	Peril Strait Granitics	5%

(b) Soils: Shallow mineral soils with good drainage can be found on steeper slopes due to rapid loss of material by erosion and efficient rainwater runoff. Deep, well drained soils commonly occur below the shallow soils on the gentler slopes where transported soil materials have collected. Poorly drained soils are found associated with low relief and impermeable subsurface layers. In locations with poor drainage, deep organic soils (muskegs) tend to form. In riparian areas, soil zones tend to contain sand and gravels as a result of flood deposition.

(c) Vegetation: The vegetation of this roadless area consists primarily of typical spruce-hemlock forests. Western hemlock-Sitka spruce dominate the overstory while the understory is composed of shrubs

such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Muskegs, mapped as approximately 3,528 acres, are abundant within this area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. These areas, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low elevation timber stands where drainage is restricted. Trees within the muskegs are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar.

Tideflats are found at the heads of many of the bays and estuaries and are usually associated with stream estuaries. The tideflats support sea milkwort, glasswort, and algae. Beach meadows occur between the shore and the forest. Lower beach meadows are composed of beach ryegrass, reed bent grass, hairgrass, fescue grass, beach lovage, goose tongue, and sedges. Upper beach meadow plants include yarrow, bedstraw, starwort, ferns, western columbine, and cow parsnip. Oregon crabapple, alder, devil's club, and blueberry occur along the border of the beach meadow and the forest.

At elevations generally above 2,000 feet, alpine plant communities (mapped at approximately 24,405 acres) are characterized by low shrubs, grasses, and sedges. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 179,448 acres mapped as forest land, of which 82,901 acres or 46 percent are mapped as productive old-growth forest. Of the productive old growth, 25,407 acres or 31 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,499 acres of high-volume, coarse-canopy old growth. The area also includes 1,567 acres of second growth where beach harvest has occurred in the past.

(d) Fish Resources: There are numerous fish-bearing creeks in this area, including Baranof, Glacial, and Clear Rivers, and Takatz, Kasnyku, Rodman, Range, and Fish Bay Creeks. Most streams support runs of coho, chum, and pink salmon; cutthroat trout; and Dolly Varden char. Lake Eva also supports sockeye salmon and steelhead trout.

(e) Wildlife Resources: There are many varied wildlife resources in this roadless area. Bird and waterfowl rearing and nesting areas are abundant in this area. Generally, the area provides good habitat for Sitka black-tailed deer, mountain goats, and brown bear. Furbearers such as mink, river otter, and marten are also found here. Bald eagle habitat, including nesting and roosting trees, is found in this roadless area along the shorelines. MacDonald and Cook (1999) do not list black bears, moose, or wolves as inhabitants of Baranof Island. A Steller sea lion haul out is located at the southern tip of Catherine Island (USDA Forest Service, 1992).

(5) Management Direction and Current Uses: This roadless area was allocated to nine Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These nine LUDs are Timber Production, Modified Landscape, Scenic Viewshed, Transportation and Utilities System (TUS), Remote Recreation, Old-growth Habitat, Semi-Remote Recreation, Special Interest Area, and Wild River. The TUS LUD is a secondary LUD that overlays the other land uses.

LUD	Acres
Timber Production	74,781
Modified Landscape	6,805
Scenic Viewshed	2,621
Transportation and Utility System	NA
Remote Recreation	102,764
Old-growth Habitat	77,623
Semi-Remote Recreation	44,647
Special Interest Area	11,661
Wild River	3,416

Approximately 26 percent of this roadless area (not including the TUS overlay) was allocated to a development LUD (Timber Production, Modified Landscape, Scenic Viewshed). The Timber Production LUD was assigned to approximately 23 percent of the roadless area. Land along sections of the area's shoreline was allocated to the Modified Landscape LUD, accounting for approximately two percent of the roadless area. The Scenic Viewshed LUD was allocated to approximately 1 percent of the roadless area, located mainly along Peril Strait and Sergius Narrows. A proposed state road corridor and a potential power transmission corridor that run through sections of this area were assigned to the Transportation and Utility System LUD overlay.

Approximately 74 percent of this area was allocated to non-development LUDs (Remote Recreation, Old Growth Habitat, Semi-Remote Recreation, Special Interest Area, and Wild River). Approximately 32 percent of the roadless area was allocated to the Remote Recreation LUD. The Old-growth Habitat LUD was assigned to about 24 percent of this roadless area. Approximately 14 percent of the roadless area was allocated to the Semi-Remote Recreation LUD. Around Clear River, approximately 4 percent of the roadless area was allocated to the Special Interest Area LUD, for zoological features. Approximately 10 river miles of Glacial River, or 1 percent of the roadless area, was allocated to the Wild River LUD.

Five parcels of land within or adjacent to the roadless area are under other ownership. These include land around Takatz Lake and at Baranof Warm Springs owned by the State of Alaska, and two small parcels in Rodman Bay and along Rodman Creek, and the recent conveyance of lands on the northeast portion of Catherine Island.

There are a number of authorized special uses located within the area. Northern Southeast Region 1 Aquaculture Association (NSRAA) has a special use permit for use of facilities at Takatz Bay for securing net pens for the rearing of salmon. The ADF&G has a special use permit for use of facilities located at the head of Kasnyku Bay for the Hidden Falls Fish Hatchery. These facilities include hatchery buildings, residential buildings, a hydroelectric site at Goat Lake, water and waste disposal systems, roads, trails, boardwalks, and docks. The permit covers over 18 acres. There is a Forest Service radio repeater located on Mount Furuhelm in the southern portion of the area. There are also electronic/radio sites on the ridge above the east arm of Rodman Bay, and a site on Manley Mountain just north of Baranof Warm Springs.

Recreational use of the area is primarily for hunting and fishing, and enjoying the scenery. This use is scattered across the area, with the usual concentrations near lakes, streams, and shorelines. Three National Forest System trails are located within the area, as well as four Public Recreation Cabins and a shelter. In addition, there is a Forest Service administrative cabin located in Hanus Bay. Outfitter/guide use was reported at 18 locations in and around the area in 1999, primarily within inlets and along the shoreline. A total of 216 groups and 883 clients were reported using the area. Activities pursued by these groups included brown bear, deer, and goat hunting; hiking, sightseeing; camping; and fishing. Subsistence use occurs in this area.

(6) Appearance (Apparent Naturalness): A vast majority of the area is considered unmodified except for those areas, primarily located near the shoreline, with evidence of current or historic use. Evidence of historic use includes old salmon and herring salteries, old cabins, and other historic occupancies. Developed areas border and extend into the roadless area along drainages in a number of locations. The roads that extend into the area are excluded from the roadless area. Older beach logging has also occurred within some sections of the area itself, primarily on the Duffield Peninsula and in the vicinity of Rodman Bay. These modifications are readily apparent to visitors to these specific sites and the areas in their immediate vicinity. However, overall the area displays natural characteristics when viewed from major travel routes or use areas and once within the area.

(7) Surroundings (External Influences): The area is bordered by saltwater along a large percentage of its boundary. As a result, external influences on those sides are limited to the sights and sounds of motorized boats. The area is bordered to the south by the South Baranof Wilderness and most of the western boundary adjoins the Sitka Urban Roadless Area (#331). The adjoining lands in both of these cases are in a natural condition. Developments and associated activities have taken place in several locations around the edge of the area. Most of this development has occurred in the northern portion of the area, such as Rodman Bay and on and near the northern portion of Catherine Island. These activities have had a noticeable influence on the roadless area in these more localized areas.

(8) Attractions and Features of Special Interest: The Clear River Special Interest Area contains one of the most unique estuary environments in the outer islands. It contains habitat for a diverse number of birds, fish and plants. Three other features of special interest in the North Baranof Roadless Area are Kelp Bay, Baranof Warm Springs, and the Baranof Island glaciers. Kelp Bay is a large sheltered Bay with three arms and a number of subbasins. Baranof Warm Springs consists of a small group of lakes, a hot springs, and Warm Springs Bay. However, part of the Baranof Warm Springs area is now state-owned and excluded from the roadless area. Finally there is a string of glaciers, ice, and snow fields in the mountain ranges of the roadless area. These glaciers are the southernmost island glaciers in North America.

The area contains 48 inventoried recreation places, which cover 40,772 acres, or 13 percent of the roadless area. The natural features of the area, the scenery, and the opportunity to see wildlife are all considered attractions. High quality fishing opportunities in the streams and lakes also provide attractions. Three National Forest System trails are located within the area, as well as four public recreation cabins, one shelter and an administrative cabin.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of the roadless area changed in three ways between 1989 and 2003. First, beach logged areas (i.e., areas that were logged but not roaded) that were excluded from the 1989 area are included within the boundaries of the 2003 area. Second, Warm Springs Bay and the area immediately surrounding it is now state-owned and excluded from the roadless area. Additionally, the west side of the Baby Bear Bay area was conveyed to the State and is now a marine park. Third, several smaller areas near developed portions of the boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified except for the evidence of current and historic use of the area, primarily located near the shoreline. Developments border and extend into the area along drainages in several locations. The roads that extend into the area are excluded from the roadless area. Older beach logging has also occurred within the area itself, primarily on the Duffield Peninsula and in the vicinity of Rodman Bay. These impacts, although locally evident, have a very low overall effect on the natural integrity of the roadless area. Both the relative size of the developments and their location along the shoreline contribute to this low impact. The area's long-term ecological processes are intact and the effects of human influences on natural processes are unmeasurable. Overall, the area's natural integrity and apparent naturalness is very high and is suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a very high opportunity for solitude and primitive recreation within the area. Both the size of the area and the screening offered by the topography increase the opportunity for solitude and primitive recreation. Recreational use of the area is relatively limited and dispersed, so that encounters with other visitors are unlikely. Balancing those factors are the effects of the areas of previous timber activity and associated road systems. The sight or sound of airplanes overhead and boats along the coastlines can occasionally intrude on a visitor's solitude. Along Peril Strait and Neva Strait, ferries of the Alaska Marine Highway system can be observed or heard.

Outfitter/guide use was reported at 18 locations in and around the area in 1999, primarily within inlets and along the shoreline. A total of 216 groups and 883 clients were reported using the area. Activities pursued by these groups included brown bear, deer, and goat hunting, hiking, sightseeing, camping, and fishing.

The area provides a very high opportunity for primitive recreation as a result of its size, topographic screening, diversity of recreation opportunities, and physical challenges. The area has a highly irregular topography and diverse vegetation that combine to offer a setting capable of providing a variety of primitive recreation opportunities. There are lakes, ponds, streams, bays, rugged mountains, and a varied coastline that contribute to these opportunities. The absence of developed recreational facilities in certain areas further enhances the opportunity for primitive recreation.

The area provides primarily primitive and semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	171,544	53%
Semi-Primitive Non-Motorized (SPNM)	128,487	40%
Semi-Primitive Motorized (SPM)	13,609	4%
Roaded Modified (RM)	10,554	3%
Rural (R)	28	0%

The area contains 48 inventoried recreation places, which cover 40,772 acres, or 13 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	9	20,867
SPNM	14	11,331
SPM	15	7,219
RM	20	1,355
R	0	0

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are three National Forest System Trails within the area: the Lake Eva-Hanus Bay Trail, the Sadie Lake Trail, and the Warm Springs Bay Trail. There are also four public recreation cabins within the Roadless Area: Lake Eva, Appleton Cove, Piper Island and Baranof Lake. There is a shelter in the Kakul Narrows Areas.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the North Baranof Roadless Area Roadless Area was 25 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was also given a rating of 25.

(4) Ecologic and Geologic Values: The North Baranof Roadless Area is part of a larger roadless land area that stretches the length of Baranof Island. This area consists of four roadless areas and the South Baranof Wilderness. The four roadless areas that comprise this larger area are North Baranof (#330), Sitka Urban (#331), Redoubt (#333), and Port Alexander (#334). The Clear River Special Interest Area offers unique habitat to support a diverse number of bird, plant and fish species.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed two of the 21 VCUs as primary salmon producers, 287 (Fish Bay) and 314 (Glacial River). Two VCUs were identified as primary sportfish producers, 295 (Lake Eva) and 326 (Warm Springs Bay).

There are numerous fish-bearing creeks in this area, including Baranof, Glacial, and Clear Rivers, and Takatz, Kasnyku, Rodman, Range, and Fish Bay Creeks. Most streams support runs of coho, chum, and pink salmon; cutthroat trout; and Dolly Varden char, while chinook salmon inhabit estuaries and bays. Lake Eva also supports sockeye salmon and steelhead trout. Kokanee are found in one lake in the Kelp Bay area (USDA Forest Service, 1992). The estimated annual peak escapements for Fish Bay Creek, Eva Creek and Lake, Clear River, and Baranof River are 59,800, 3,500, 55,400, and 13,200 pink salmon,

respectively. Fish Bay Creek also has good coho smolt capability (ADF&G, 1998). The Lake Eva area represents a highly productive sockeye fishery and a popular area for recreational fishing.

(b) Wildlife Resources: There are many varied wildlife resources in this roadless area. Generally, the area provides good habitat for Sitka black-tailed deer, mountain goats, and brown bear. Furbearers such as mink, river otter, and marten are also found here. Bird and waterfowl rearing and nesting areas are abundant in this area. Marbled murrelets have been documented in the area. Bald eagle habitat, including nesting and roosting trees, is found in this roadless area along the shorelines. The U.S. Fish and Wildlife Service has identified 280 bald eagle nest sites in the Kelp Bay area alone. The American peregrine falcon and Aleutian Canada goose may migrate through the area (USDA Forest Service, 1992). MacDonald and Cook (1999) do not list black bears, moose or wolves as inhabitants of Baranof Island. A Steller sea lion haul out is located at the southern tip of Catherine Island (USDA Forest Service, 1992).

Clear River Special Interest Area contains spruce and hemlock habitat with black cottonwood/willow communities and an estuarine environment. Both are unique to the area. This supports a diverse number of bird, plant and fish species

Based on harvest data compiled from 1985 to 1995, 2 of the 21 VCUs in the area were ranked in the first 25 percent of brown bear harvest areas on the Tongass. Three other VCUs in the area were ranked in the second 25 percent (ADF&G, 1998).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Peale's peregrine falcons pass through the area during their spring and fall migration flights. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, 12 sensitive plant species are known or suspected to occur in the Sitka Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are very limited karst resources in this roadless area. One high vulnerability karst area is west of the lower lake feeding Fish Bay Creek; the second high-vulnerability karst area is approximately 2 miles west. These areas represent 127 acres, or less than 1 percent of the roadless area. Approximately three quarters of the karst is rated as high vulnerability. There are a few cirque glaciers and small permanent ice fields in the southern part of the area. These glaciers are the southernmost island glaciers in North America.

(5) Scientific and Educational Values: Clear River was designated as a Special Interest Area in the 1997 Tongass Land and Resource Management Plan. Clear River was identified as a Zoological Special Interest Area. The area is considered one of the most unique estuary environments in the Outer Islands geographic province. Clear River (non-glacial) and Glacier River (glacial) converge into the same grassflat/intertidal zone, creating habitat for a diverse number of birds, fish and plants, and supporting high densities of brown bear and land otter.

There are no Research Natural Areas in this roadless area. Lake Eva was considered as one of over 60 potential candidate Research Natural Areas (RNAs) identified by the Research Natural Area Steering Committee, but was not included in the 30 of these areas that were recommended as "priority potential RNA proposals." The Lake Eva area was identified as a highly productive sockeye fishery with an active history of research. The North Baranof Roadless Area is located approximately 10 miles east of the city of Sitka and, therefore, readily accessible to school-age children.

(6) Scenic Values: The visual character type of this roadless area is classified as Baranof Highland. Terrain in this roadless area consists of an irregular, rugged asymmetrical chain of landforms 2,000 to 5,300 feet in elevation with a steep eastern slope and a gentler western slope deeply indented with fiords. Generally, landforms are visually

massive, bulky, and stark throughout the character type. Shoreline forms are very rugged with steep-sided fiord country on both east and west coasts.

Rugged headwalls, cliffs, and escarpments are common on the west side of the Baranof Highland character type, as a result of exposure to the sea wind and waves. Rock faces are sometimes visible on steep-sided fiords near saltwater throughout the roadless area. Numerous rocky crests, sharp ridges, horns, aretes, and cirques are found at higher elevations. Snow can be seen all year round on the higher summits with cirque glaciers and small permanent ice fields, especially in the southern portion of the area.

The North Baranof Roadless Area on the northern and eastern shore of Baranof Island is a typical representation of the Baranof Highland visual character type. This area displays a coastline deeply and repeatedly scalloped by fiords and bays. Combinations of historic glaciation and erosion from high levels of precipitation have further accentuated the carving of the topography. The glaciers, cirques, ice, and snow fields in the southern half of the area are characteristic of this type.

A vast majority of the area is considered unmodified except for those areas, primarily located near the shoreline, with evidence of current or historic use. Evidence of historic use includes old salmon and herring salteries, old cabins, and other historic occupancies. Current use includes fish enhancement activities and facilities, fish hatchery facilities, various short-term occupancies, and other evidence of use of the area and the surrounding waters. Developed areas border and extend into the area along drainages in several locations. These areas are excluded from the roadless area. Older beach logging has also occurred within the area itself, primarily on the Duffield Peninsula and in the vicinity of Rodman Bay. These modifications are readily apparent to some visitors to these specific sites and areas in their immediate vicinity. This timber harvest may also be apparent from travel routes and use area viewpoints. However, overall, the area displays its natural characteristics when viewed from major travel routes or use areas and once within the area. The natural appearance of the roadless area dominates the landscape background.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include:

- Alaska Marine Highway: Peril Strait and Chatham Strait
- Tour Ship Routes: the West Coast of Baranof Island, Peril Strait, and Chatham Strait
- Recommended Wild, Scenic, and Recreational River: Glacial River
- Small Boat Routes: St. John Baptist Bay, Chatham Strait to Warm Springs Bay and Cosmos Cove, Nakwasina Passage, Peril Strait to Chatham Strait, Saook Bay, Rodman Bay, Appleton Cove, The Basin, Middle Arm (Kelp Bay), Echo Cove, Portage Arm (Kelp Bay), Deep Cove, and Peril Strait to Hanus Bay and Fish Bay
- Saltwater Use Areas: Fish Bay, Rodman Bay, and Deadman Reach
- Dispersed Recreation Areas: Baranof Island, Lake Eva, and Hidden Falls Hatchery and Archeology Site
- Public Recreation Cabins: Baranof Lake, Appleton Cove, Piper Island, and Lake Eva
- Hiking Trails: Warm Springs Lake #559, Sadie Lake, and Lake Eva #472
- Boat Anchorages: Warm Springs Bay, Cosmos Cove, Dead Tree Island, Point Moses, Schulze Cove, The Basin, Pond Island, Echo Cove, Echo Bay, and Saook Bay

Approximately 22 percent of the roadless area is inventoried Variety Class A, which possesses landscape diversity unique for the character type. Approximately 54 percent of this roadless area was inventoried as being Visual Variety Class B (possesses landscape characteristics common for the character type). About 23 percent was rated as Variety Class C (possesses a low degree of landscape diversity).

The majority of this roadless area, approximately 88 percent, is inventoried in Existing Visual Condition (EVC) I, which applies to areas that appear to be untouched by human activity. About 1 percent of the area is in EVC III, where changes in the landscape are noticed by the average person, but do not attract attention. Another 1 percent of the land is in EVC IV, where changes in the landscape are easily noticed by the average person and may attract some attention, but they resemble natural patterns. Approximately 9 percent of the area was in EVC V, where changes in the landscape are obvious to the average person and appear to be major disturbances.

(7) Social, Cultural, and Historical Values: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Historic use of the area includes sawmills, salmon and herring salteries, fisheries enhancement facilities, and a variety of other occupancies and settlements. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found. Goldschmidt and Haas (1946) identified aboriginal use (including hunting/trapping, berrying, salmon, and shellfish) and structures along the shoreline of the area, including a fort, numerous smokehouse/cabin sites, and a number of commercial fish traps.

Recreational use of the area is primarily for hunting and fishing, and enjoying the scenery. This use is scattered across the area, with the usual concentrations near lakes, streams, and shorelines. Outfitter/guide use was reported at 18 locations in and around the area in 1999, primarily within inlets and along the shoreline. A total of 216 groups and 883 clients were reported using the area. Activities pursued by these groups included brown bear, deer, and goat hunting, hiking, sightseeing, camping, and fishing. Subsistence use occurs in this area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that 5 of the 21 VCUs (lying between Kelp Bay and Krestof Sound) located in this area are subsistence use areas with a high sensitivity to disturbance. Three of the VCUs in this area were included among the VCUs with highest community use value. Two other VCUs in the area were included in the third tier of highest community use value (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The North Baranof Roadless Area is generally well defined by topographic features. The boundaries determined by Neva Strait, Kakul Narrows, Peril Strait, Chatham Strait, and by the South Baranof Wilderness are easily described and recognized. Even the western boundary adjoining the Sitka Urban Roadless Area (#331) follows well-defined topographic divides. There are, however, exceptions to this in several areas where the boundary is defined by developments. In addition, there are five land parcels of other ownership within or adjacent to the roadless area which could create management problems. These include state-selected land around Takatz Lake, Baby Bear Bay, and Baranof Warm Springs, and two small private parcels in Rodman Bay and along Rodman Creek.

The feasibility of management of this area as wilderness or in an unroaded condition is good, as there are no significant motorized access or other current nonconforming uses within the boundaries of the area.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: The varied terrain, diverse vegetation, and attractive scenery of this area provide unlimited recreation potential for dispersed recreation. Additional trails and cabins or shelters are possible. There may be opportunities for constructing a Cross Baranof Trail from Baranof Warm Springs to Sitka; extending the Lake Eva Trail to the Adirondack Shelter at the inlet to Lake Eva; constructing a Fish Bay Trail to the Fish Bay Hot Springs; and constructing a recreation facility at the Fish Bay Hot Springs.

In 1996, the Alaska Visitors Association (AVA) proposed the following recreation developments in this roadless area:

- Kelp Bay: Backcountry recreation lodge for 250 persons/day, day use recreation for 150 persons/day, hut-to-hut hiking for 25 persons/day, day-use wildlife observatory for 50 persons/day, overnight wildlife observatory for 50 persons/day, leased proprietary camp for 15 persons, heli-hiking/skiing for 30 persons/day, equipment storage facility, flight-seeing landings for 100 persons/day, day boat docks for 50 persons/day, small cruise ship shore-walk for 25 person/day, and boardwalks, paths and trails.
- Baranof Warm Springs: All prototypes with the possible exception of resorts, and a small cruise ship shore-walk for 25 persons/day.
- Hanus Bay and Lake Eva Trail: Small cruise ship shore-walk for 25 persons/day.
- The Katlian to Rodman Bay corridor: All uses (some uses conditional on road development) and hut-to-hut hiking for 25 persons/day.
- Fish Bay Hot Springs: Backcountry recreation lodge for 250 persons/day.
- St. John Baptist Bay, Olga/Neva/Salisbury Sound Corridor: Day-use recreation for 300 persons/day, hut-to hut hiking for 25 persons/day, day-use wildlife observatory for 50 persons/day, overnight wildlife observatory for 50 persons/day, leased proprietary camp for 15 persons, heli-hiking/skiing for 30 persons/day,

equipment storage facility, flight-seeing landings for 100 persons/day, day-boat docks for 50 persons, a cruise ship boardwalk for 25 persons/day, and boardwalks, paths and trails.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: There are no fish improvement projects planned for this area.

(4) Wildlife Resources: There are no wildlife habitat improvement projects planned for this area.

(5) Timber Resources: There are 82,901 acres mapped as productive old growth in the roadless area. There are also 1,567 acres of second growth where beach harvest has occurred in the past. Of these acres, 48,658 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 6,521 acres or 2 percent of this roadless area are estimated to be suitable for timber production. Approximately 1,693 of the suitable acres are mapped as high-volume old growth; of these acres, 46 are mapped as high-volume, coarse-canopy old growth. The potential for managing timber in this roadless area is dependent on higher market values.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present in the area. There are no known epidemic disease occurrences.

(7) Minerals: The area does not have a high mineral development potential and there are no known mining claims. However, the USGS Mineral Resource Data website (2001) indicates that there are several prospects for gold, copper, and zinc in this area. This area contains an estimated 85,730 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); all of these acres are considered to have low potential for development.

(8) Transportation and Utilities: A proposed state road corridor and a potential power transmission corridor that run through sections of this area were assigned to the Transportation and Utility System LUD in the 1997 Tongass Land and Resource Management Plan. This proposed road corridor was not included in the 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999).

(9) Water Availability and Use: The public recreation cabins and the special use areas (NSRAA at Takatz Bay and the ADF&G facilities at Kasnyku Bay) create the water demand in this roadless area. The ADF&G facilities include hatchery buildings, residential buildings, water and waste disposal systems, roads, trails, boardwalks, and docks. A hydroelectric site at Goat Lake is also a part of these facilities.

(10) Areas of Scientific Interest: The mapped karst resources encompass approximately 127 acres or less than one percent of the roadless area. Another feature of scientific interest is the area around Lake Eva, which has been identified as having potential for Research Natural Area (RNA) status. The Lake Eva area was identified because it represents a highly productive sockeye fishery with an active history of research. Forest types present are typical spruce and hemlock, which have the potential to serve as baseline monitoring sites for nearby areas that have had historic timber management. Lake Eva is a low elevation valley moraine lake.

Clear River was designated as a Special Interest Area in the 1997 Tongass Land and Resource Management Plan. Clear River was identified as a Zoological Special Interest Area. The area is considered one of the most unique estuary environments in the Outer Islands geographic province. Clear River (non-glacial) and Glacier River (glacial) converge into the same grassflat/intertidal zone, creating habitat for a diverse number of birds, fish and plants, and supporting high densities of brown bear and land otter. Management of the area as wilderness may restrict activities in the area.

(11) Land Use Authorizations: Land use authorizations in the area include NSRAA's special use permit for use of facilities at Takatz Bay for securing net pens for the rearing of salmon and the ADF&G's special use permit for use of facilities located at the head of Kasnyku Bay for the Hidden Falls Fish Hatchery. The ADF&G facilities include hatchery buildings, residential buildings, water and waste disposal systems, a hydroelectric facility, roads, trails, boardwalks, and docks. The permit covers over 18 acres. There is a Forest Service Radio Repeater located on

Mount Furuhelm in the southern portion of the area. There are also electronic/radio sites on the ridge above the east arm of Rodman Bay, and a site on Manley Mountain just north of Baranof Warm Springs.

(12) Land Status: All land within the roadless area is part of the National Forest System. Encumbered land within the roadless area is located in northeast Catherine Island. Four parcels of land within or adjacent to the roadless area are under other ownership and are not a part of the roadless area. These include land around Takatz Lake, Baby Bear Bay, and Baranof Warm Springs owned by the State of Alaska, and two small private parcels in Rodman Bay and along Rodman Creek.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Most use of the area is associated with recreational boating, hunting and fishing, and viewing wildlife and scenery of the area.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the North Baranof Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also proposed that Fish Bay Creek and the shoreline from St. John Baptist Bay to Pogibshi Point be assigned Wild and Scenic River status. Some of the areas where timber harvest has occurred were identified for protection as Restoration Areas; others on the east side of the area were identified as roaded areas available for logging.

(c) Public Input During Forest Plan Revisions and Appeals: Parts of this area were specifically addressed in public input received during the Forest Plan revision and appeal. Most commenters cited different combinations of scenic, recreation, subsistence, and wildlife values and uses in identifying areas of Baranof Island for protection or non-timber allocations. These areas included Kelp Bay and Catherine Island (high subsistence use), Peril Strait, and the ferry route to Sitka (hunting, winter range, and scenic quality). Catherine Island, Kelp Bay, and Saook Bay were identified as traditional use areas for the people of Angoon, with Kelp Bay identified as the most important subsistence area on the east side of Baranof Island. Commenters requested that Catherine Island, all three arms of Kelp Bay, and the coastline from Kelp Bay to Warm Springs Bay be assigned the Primitive Recreation (now Remote Recreation) or Old-Growth LUDs. Timber industry representatives requested that Management Areas (MA) C41, C42, and C43, which include Rodman Bay, Saook Bay, Kelp Bay, and Catherine Island, be assigned to the Timber Production LUD, and should have developed road systems with ties to log transfer facilities for better timber economics, and ties to Sitka for use by residents for roaded recreation. They also requested that MA C40, which is partially located within the North Baranof Roadless Area, be entirely assigned to Timber Production, with Modified Landscape along Neva and Olga Straits to take advantage of the existing road system.

Others requested that MAs C41 and C42 be protected from logging. The Sitka Conservation Society (SCS) identified the Hoonah Sound to Sitka ferry route and adjacent areas as the "heart of Sitka's economy and lifestyle" and asked that recreation LUDs be applied to this area. A couple of commenters favored more roads in this area, or roads connecting Sitka with the east side of Baranof Island; others opposed more roads, or any road connection across the island. One commenter in 1996 recommended that North Baranof Island be managed for a local wood products industry.

The AVA proposed recreation developments for a number of locations within the area, including Kelp Bay, Baranof Warm Springs, Hanus Bay and Lake Eva Trail, Katlian to Rodman Bay corridor, Fish Bay Hot Springs, and the St. John Baptist Bay, Olga/Neva/Salisbury Sound Corridor. These proposals are summarized in Section III (1) above.

The appeal filed by the Southeast Alaska Conservation Council (SEACC) identified the VCUs along the north shore of the area (VCUs 287 to 289) as part of the Sitka Local Use Area and objected to parts of these VCUs still being "open to clearcutting." This appeal also objected to East Saook Bay (the east half of VCU 294) still being open to intensive development. The appeal filed by the SCS also requested that East Saook

Bay be protected from timber harvest. The SCS appeal also noted its support of the "Citizens proposal" that identified a number of rivers in the Chatham/Sitka area, including Fish Bay River and Hot Springs, for Wild and Scenic River designation. The appeal also noted that forested wetlands within Fish Bay should not be included in the timber base. In addition, the SCS appeal identified Warm Springs Bay as one of a number of salt chuck areas that should be assigned special status so that "future plan revisions do not incorporate these areas in the timber base."

The appeal filed by the Prince of Wales Conservation League identified north Baranof Island as an area where the location and distribution of roadless reserves for brown bear habitat should be re-evaluated. The appeal filed by the Hoonah Indian Association et al, requested that logging not be permitted along the "stretch of lands and islands on both sides of the various narrows that span from Sitka Sound to Hoonah Sound" because the subsistence harvest of deer in this area "already exceeds the sustainable hunting level by a wide margin" and logging would exacerbate this situation.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: Comments submitted in response to the proposed Kelp Bay Timber Sale in 1992 identified Little Lake Eva and the lake in the drainage east of Little Lake Eva as unique, citing the presence of kokanee salmon. Commenters noted that this, combined with the area's high recreational value suggest that it has much higher value if left roadless. Comments also noted that the area is important for wildlife. Other commenters supported roads and logging in the Kelp Bay area.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as having important fish and wildlife habitat and populations; although not a top priority for protection, it ranked in their top third among all roadless areas.

The Alaska Department of Fish and Game rated the North Baranof roadless area as the third highest priority for protection in northern Southeast Alaska. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

SEACC included this area in a contiguous complex of roadless areas consisting of Roadless Areas 330, 331, 332, and 333. They recommended this complex for permanent protection as LUD II. The combined area represents just over 500,000 acres. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 330, 331, 332, and 333 as a contiguous complex of roadless areas that should be considered one roadless area and recommended it for permanent protection as LUD II. The Natural Resources Defense Council requested that Saook Bay be accorded protected status.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

Some individuals identified East Saook Bay as an area that needed protection. Others recommended the roadless area for protection. One individual noted that Saook Bay is no longer under contract and this should be changed on the maps and for the analysis.

(2) Nearby Roadless and Wilderness Areas and Uses: There are three existing wilderness areas located in proximity to the North Baranof Roadless Area. The South Baranof Wilderness borders the area to the south. The West Chichagof-Yakobi Wilderness lies directly northwest across Salisbury Sound from the area. The Admiralty Island National Monument-Kootznoowoo Wilderness lies directly east across Chatham Strait.

The North Baranof Roadless Area is part of a larger roadless land area that stretches the length of Baranof Island. This area consists of four roadless areas and the South Baranof Wilderness. The four roadless areas that comprise this larger area are North Baranof (#330), Sitka Urban (#331), Redoubt (#333), and Port Alexander (#334).

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	65	90
Sitka (Pop. 8,835)	10	25
Hoonah (Pop. 860)	40	70
Angoon (Pop. 572)	10	10

The nearest stop on the Alaska Marine Highway is Sitka.

(4) Relative Contribution to the National Wilderness Preservation System: The North Baranof Roadless Area is located on the north end of Baranof Island. It is bordered to the north by Peril Strait, to the east by Chatham Strait, and to the south by the South Baranof Wilderness. Kakul Narrows and Neva Strait border the area to the northwest. The Sitka Urban Roadless Area (#331) borders the area to the west. The area also includes Catherine Island on the northeast corner of Baranof Island and a number of offshore islands and rocks. The area is generally characterized by an irregular, rugged chain of mountains 2,000 to 5,300 feet in elevation. The eastern coast is deeply indented with fiords while the northern shore is characterized by numerous large bays. Numerous rocky crests and sharp ridges are found at higher elevations. Snow can be seen all year round on higher summits with a few cirque glaciers and small permanent ice fields in the southern part of the area. Lakes are plentiful, especially in the southern portion of the area. The largest lake is Baranof Lake which stretches approximately three miles and lies at an elevation of 145 feet.

The North Baranof Roadless Area is mostly unmodified. The natural integrity and apparent naturalness is very high. The opportunity for solitude and primitive recreation is very high to outstanding.

The roadless area has moderate to high scenic qualities; approximately 22 percent of the landscape is considered distinctive from a scenery standpoint. The area includes the Clear River Special Interest Area with high estuarine values, several cirque glaciers, and some localized karst development. Overall, these features are considered moderate for the roadless area.

The roadless area includes about 25,407 acres of high-volume, old-growth forest. Of these acres, approximately 1,499 are mapped as high-volume, coarse-canopy old growth.

The North Baranof Roadless Area is classified as being in the East Baranof Island and West Baranof Island Biogeographic Provinces. Approximately 82 percent of the roadless area is within the East Baranof Province and represents about 67 percent of the province. The other 18 percent of the roadless area is in the West Baranof Province and represents about 8 percent of that province. The North Baranof Roadless Area makes up nearly all of the roadless area within the East Baranof Province and the South Baranof Wilderness makes up about 23 percent of the province . The portion of the North Baranof Roadless Area that lies in the West Baranof Province is part of 8 inventoried roadless areas found within the province which makes up about 62 percent of that province. The majority of the South Baranof Wilderness is also within this province and makes up approximately 29 percent of the province.

The North Baranof Roadless Area lies completely within the Baranof-Chichagof Fjordlands Ecological Section. This portion represents 15 percent of the entire ecological section, which is well represented in existing wilderness (28 percent) and other non-development LUDs (35 percent) with an additional 13 percent in LUD II.

The largest ecological subsection in this roadless area is the Central Baranof Metasediments (49 percent). This portion represents 45 percent of the entire ecological subsection, which has approximately 20 percent existing wilderness and is well represented by non-development LUDs (64 percent). The North Baranof Complex Ecological Subsection represents 31 percent of the roadless area. This portion represents 77 percent of the

ecological subsection within the Tongass National Forest boundary and is well represented by non-development LUDs (36 percent), but not by wilderness or LUD II. The Sitka Sound Complex Ecological Subsection represents 15 percent of this roadless area. This portion represents 27 percent of the entire ecological subsection, which is well represented by non-development LUDs (67 percent), but not by wilderness or LUD II. The Peril Strait Granitics Ecological Subsection represents 5 percent of this roadless area. This portion represents 6 percent of the entire ecological subsection, which is well represented by non-development LUDs (40 percent, including 25 percent in LUD II).

The North Baranof Roadless Area was rated 25 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 12th from the highest (along with 12 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing this area in an unroaded condition, and little support for designating the area as wilderness. Designation of the area would add Congressional protection to portions of the North Baranof Complex and the Sitka Sound Complex Ecological Subsections; neither of these subsections contain any areas under long-term Congressional protection. Designation would create a relatively large wilderness in conjunction with the South Baranof Wilderness and would include the moderate to high scenic qualities, Clear River Special Interest Area, small cirque glaciers, and localized karst. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be high.

V. Environmental Consequences

The North Baranof Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, or 4 is implemented. Approximately 74 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 26 percent of the roadless area. The land in the development LUDs includes an estimated 6,521 acres that are suitable for timber production (15 percent of the suitable acres on the Sitka Ranger District). Approximately 46 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 85,730 acres of undiscovered locatable mineral resources; all of which are considered to have low potential for development. The roadless area includes a potential road and power transmission corridor, although no actual proposals are being analyzed. The values associated with the natural settings of the roadless area are protected by the Forest Plan in most of the area. These values could be affected by developments in those areas where the Forest Plan allows development. The karst, geologic and most scenic values of the roadless area are protected by the Forest Plan.

Under Alternative 5 and 7, a 22,574-acre portion of the roadless area currently in lands allocated to Timber Production, Old-growth Habitat, and Semi-Remote Recreation would be converted to Recommended Wilderness. The land remaining in the development LUDs would include an estimated 5,052 acres that are suitable for timber production. Timber harvest would not be allowed in the area converted to Recommended Wilderness and the potential for other development, including recreation and mineral, would be significantly restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the Saook Bay portion of the roadless area would be provided long-term protection if designated wilderness.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting, most special uses, and recreation use and developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the scenic, karst, and geologic values, would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to portions of the North Baranof Complex and the Sitka Sound Complex Ecological Subsections; neither of these subsections contain any areas under long-term Congressional protection.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed and the potential for other development, including recreation and mineral, would be significantly restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic, karst, and geologic values, would be provided long-term protection if designated wilderness. Designation of the area would

add Congressional protection to portions of the North Baranof Complex and the Sitka Sound Complex Ecological Subsections; neither of these subsections contain any areas under long-term Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 330 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness					22,574		22,574	324,317
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area	11,661	11,661	11,661	11,661	11,661		11,661	
Remote Recreation	102,764	102,764	102,764	102,764	102,764		102,764	
Enacted Municipal Watershed								
Old-growth Habitat	77,623	77,623	77,623	77,623	74,668		74,668	
Semi-remote Recreation	44,647	44,647	44,647	44,647	44,576		44,576	
Recommended LUD II						324,317		
LUD II								
Wild, Scenic, Recreational River	3,416	3,416	3,416	3,416	3,416		3,416	
Experimental Forest								
Scenic Viewshed	2,620	2,620	2,620	2,620	2,118		2,118	
Modified Landscape	6,805	6,805	6,805	6,805	6,805		6,805	
Timber production	74,781	74,781	74,781	74,781	55,735		55,735	
TOTAL	**324,317**	**324,317**	**324,317**	**324,317**	**324,317**	**324,317**	**324,317**	**324,317**
Suitable Timber Lands	6,521	6,521	6,521	6,521	5,052	**0**	5,052	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Sitka Urban (331)

ACRES (NFS): 114,460

BIOGEOGRAPHIC PROVINCE: West Baranof Island

ECOLOGICAL SECTION: Baranof-Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 20

I. Overview and Description

(1) Location and Access: The area is located on the west side of Baranof Island, just north of the center of the island. Sitka and Nakwasina Sounds generally border the area to the west. The roadless area is, however, for the most part separated from saltwater by private lands that are part of the Sitka developed area and extend along the shoreline. The Redoubt Roadless Area (#333) and South Baranof Wilderness border the area to the south. The North Baranof Roadless Area (#330) borders the area to the north and east.

The Sitka Urban Roadless Area is part of a larger roadless land area that stretches the length of Baranof Island. This area consists of four roadless areas and the South Baranof Wilderness. The four roadless areas that comprise this larger area are North Baranof (#330), Sitka Urban (#331), Redoubt (#333), and Port Alexander (#334).

There are two primary forms of access to the Sitka Urban Roadless Area. The first is on foot from the Sitka road system along the western boundary of the area. The second access is via saltwater along the west and southwest shorelines. Most of the land along these shorelines is, however, in private ownership. Access to the area is generally very good due to its proximity to the Sitka road system and the accessibility of Nakwasina, Katlian, and Silver Bays.

Four National Forest System Trails, Beaver Lake, Gavan Hill, Harbor Mountain Ridge, and Indian River Trails, provide access to the area from the Sitka road system. In addition, the Blue Lake River Trail extends 2.5 miles from the east side of Blue Lake to the south end of Glacier Lake. A survival shelter is associated with the Gavin Hill Trail. The Sitka Urban Roadless Area is adjacent to the city of Sitka. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Sitka was established between 2,000 and 9,000 years ago as a major Tlingit Indian village. Goldschmidt and Haas (1946) identified aboriginal use (including hunting/trapping, berrying, salmon, shellfish, and trolling for halibut or King Salmon) and structures along the shoreline of the area, including camps, smokehouse/cabin sites, and village sites.

The Russians settled in Sitka in 1799, made it the headquarters of the Russian American Company, and later the capital of Russian America. After sale of Alaska to the United States, Sitka served as the territorial capital until 1900, when the capital was transferred to Juneau. Although the city of Sitka lies outside the Roadless Area, its inhabitants have used the surrounding roadless lands intensively.

Use of the area since 1900 has been primarily for hunting, fishing, woodcutting, recreation, and occasional temporary occupancies. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found.

(3) Geography and Topography: The area is generally characterized by an irregular, rugged chain of mountains 2,000 to 5,300 feet in elevation. These mountains have a steep slope and are deeply indented with bays and U-shaped valleys. Numerous rocky crests and sharp ridges are found at higher elevations. Snow can be seen all year round on higher summits with a few cirque glaciers and small permanent ice fields along the eastern boundary of the area.

Streams are generally short and flow directly to saltwater with the longest about 10 miles long. Cascades are common and small mountain lakes are plentiful.

There are 12 miles of saltwater shoreline. Approximately 57 percent of the area consists of alpine tundra, ice, snow, and rock. This includes 22,435 acres of alpine, 2,927 acres of ice and snow, and 39,473 acres of rock. There are 1,815 acres of freshwater lakes in the area. Large lakes in the area include Blue Lake. The area also includes 32 acres of small islands.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the West Baranof Island Biogeographic Province. Topographically, Baranof Island is the most rugged of all the islands in Southeast Alaska. The southern half of this province is highly dissected by steep-sided fiords. The outer coast is dotted with hundreds of small islands. All forest plant associations except those in the Western redcedar series and those found around large mainland rivers occur in this province.

Ecological Section/Subsection. The Sitka Urban Roadless Area is contained entirely within the Baranof-Chichagof Fjordlands Ecological Section (M247B). This area is represented by three ecological subsections (see table below). The Central Baranof Metasediments Ecological Subsection covers the vast majority of the roadless area. It has the tallest peaks, roughest terrain, and greatest extension of glaciers, icefields, and snowfields of all islands in Southeast Alaska. U-shaped valleys with precipitous walls are characteristic of this subsection. The bedrock is a mixture of metasedimentary, sedimentary, and granitic rocks. Almost half of this ecological subsection is alpine and approximately 10 percent land cover is hemlock-spruce forest where alluvial fans are present. The Sitka Sound Complex Ecological Subsection occupies most of the remainder of the roadless area. It is relatively low in elevation and there are no glaciers, although there are some permanent snowfields. Mixed conifer and hemlock-spruce forests dominate the lower elevations and shorelines, and forested wetlands of lodgepole pine and mixed conifer are abundant (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Baranof-Chichagof Fjordlands	Central Baranof Metasediments	87%
	Sitka Sound Complex	13%
	Necker Bay Granitics	<1%

(b) Soils: Shallow mineral soils with good drainage can be found on steeper slopes due to rapid loss of material by erosion and efficient rainwater runoff. Deep, well drained soils commonly occur below the shallow soils on the gentler slopes where transported soil materials have collected. Poorly drained soils are found associated with low relief and impermeable subsurface layers. In locations with poor drainage, deep organic soils (muskegs) tend to form. In riparian areas, soil zones tend to contain sand and gravels as a result of flood deposition.

(c) Vegetation: The vegetation of this roadless area consists primarily of typical spruce-hemlock forests. Western hemlock-Sitka spruce dominate the overstory while the understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Muskegs are abundant within this area, however due to their small size and association with forested sites, accurate acreage estimates are difficult and only 165 acres have been mapped. These areas, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low elevation timber stands where drainage is restricted. Trees within the muskegs are sparse and consist mainly of stunted hemlock, Lodgepole pine, and Alaska-cedar.

At elevations generally above 2,000 feet, the plant communities are characterized by low shrubs, grasses, and sedges. Approximately 22,435 acres are mapped as alpine. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 32,603 acres mapped as forest land, of which 13,747 acres or 42 percent are mapped as productive old-growth forest. Of the productive old growth, 3,360 acres or 24 percent are mapped as high-volume old-growth forest. The productive old growth includes about 42 acres of high-volume, coarse-canopy old growth. The area also includes 668 acres of second growth where beach harvest has occurred in the past.

(d) Fish Resources: The streams and rivers in this area support runs of pink, chum, and coho salmon and Dolly Varden char. Major fish bearing streams include Indian River, Katlian River, and Coxe River (ADF&G, 2000).

(e) Wildlife Resources: There are many varied wildlife resources in this roadless area. Bird and waterfowl rearing and nesting areas are abundant in this area. Generally, the area provides good habitat for Sitka black-tailed deer, mountain goat, and brown bear. Furbearers, such as marten, mink, and river otter, may also be found here. MacDonald and Cook (1999) do not list black bear, wolves, or moose as inhabitants of Baranof Island. Bald eagle habitat, including nesting and roosting trees, can be found in this roadless area along the shorelines.

(5) Management Direction and Current Uses: This roadless area was allocated to seven different Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These seven LUDs are Timber Production, Modified Landscape, Transportation and Utility System (TUS), Semi-Remote Recreation, Municipal Watershed, Remote Recreation, and Old-growth Habitat. The TUS LUD is a secondary LUD that overlays the other land uses. This LUD emphasizes potential major public utility or road systems. However, the underlying LUD guides management actions until the proposed facilities are constructed.

LUD	Acres
Timber Production	17,862
Modified Landscape	3,001
Transportation and Utility System	NA
Semi-Remote Recreation	59,421
Municipal Watershed	28,625
Remote Recreation	3,117
Old-growth Habitat	2,435

Approximately 19 percent of the roadless area (not including the TUS overlay) was allocated to a LUD that allows timber harvest and associated road construction (Timber Production and Modified Landscape). The Timber Production LUD was assigned to approximately 16 percent of the roadless area. Along the west boundary, approximately 3 percent of the roadless area was allocated to the Modified Landscape LUD. A proposed state road corridor and potential power transmission corridor that run through this area were assigned to the Transportation and Utility System LUD overlay.

Approximately 81 percent of this area was allocated to non-development LUDs (Semi-Remote Recreation, Municipal Watershed, Remote Recreation, Old-growth Habitat). Over half of the roadless area, approximately 52 percent, was allocated to the Semi-Remote Recreation LUD. The Municipal Watershed LUD was assigned to approximately 25 percent of the roadless area.

In pockets of land in the Blue Lake and Bear Lake area, approximately 3 percent of the roadless area was allocated to the Remote Recreation LUD. The remaining 2 percent of the area was allocated to the Old-growth Habitat LUD.

The Blue Lake Hydropower plant is located on the edge of this roadless area, and the Bear Lake plant is located within it. Also, the roadless area surrounds a 22,706 tract of high value mineral land in Silver Bay.

Recreational use of the area is primarily for hunting, fishing, and enjoying the scenery. This use is scattered across the area, with the usual concentrations near lakes, streams, and shorelines. Although Outfitter/Guide Use was reported in adjacent areas in 1999, no outfitter/guide use was reported within the boundaries of the roadless area itself. Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that six of the eight VCUs that comprise this area are subsistence use areas with a high sensitivity to disturbance.

(6) Appearance (Apparent Naturalness): The majority of the area is considered unmodified except for those areas primarily located near the streams, trails, and shorelines with evidence of current or historic use. Older beach logging has occurred along the shoreline of Nakwasina Sound. Developed private and National Forest System lands extend along drainages into the area. These areas are excluded from the roadless area. The area displays natural characteristics when viewed from major and minor water travel routes and when inside the area. Development associated with the community of Sitka dominates the foreground from Sitka Sound. However this roadless area provides a natural background for viewers. The mountains of this roadless area form the scenic backdrop to the city of Sitka, and are a feature that attracts both residents and tourists alike to Sitka.

(7) Surroundings (External Influences): The area is bordered to the north and east by the North Baranof Roadless Area (#330). The South Baranof Wilderness and the Redoubt Roadless Area (#333) border the area to the south. As a result, there are no significant external influences on those sides of the roadless area. The western boundary, however, adjoins the developments associated with the community of Sitka, the Shee Atika Village Corporation and timber management. The external influences from these developments, air traffic in the vicinity, and from a population center that uses the area extensively, combine to affect this roadless area.

(8) Attractions and Features of Special Interest: The mountains east of Sitka are the one feature of major importance to this roadless area. These mountains form a scenic backdrop that enhances the beauty of Sitka to both visitors and residents. These same mountains also provide a watershed that provides both water and power for the community. These mountains also provide a location for the population of the community to recreate.

The area contains 27 inventoried recreation places, which cover 23,893 acres, or 21 percent of the roadless area. The natural features of the area, the scenery, and the opportunity to see wildlife are all considered attractions. High quality fishing opportunities in the streams and lakes also provide attractions. Four National Forest System Trails (Beaver Lake, Gavan Hill, Harbor Mountain Ridge, and Indian River Trails) provide access to the area from the Sitka road system. In addition, the Blue Lake River Trail extends 2.5 miles from the east side of Blue Lake to the south end of Glacier Lake. There are no public recreation cabins in the area. There is, however, a survival shelter associated with the Gavin Hill Trail.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of the roadless area changed in three ways between 1989 and 2003. First, beach logged areas (i.e., areas that were logged but not roaded) that were excluded from the 1989 area are included within the boundaries of the 2003 area. Second, an area of non-National Forest System lands has extended further along Indian River into the area. This extended area is excluded from the roadless area. Third, several smaller areas along developed areas of the boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified except for the evidence of current and historic use of the area. However, developments into most of the major drainages and the urban area of Sitka immediately adjacent to the western boundary reduce the areas natural integrity and apparent naturalness. Overall, the area has high natural integrity and moderate to high apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a high opportunity for solitude and a very high opportunity for primitive recreation within the area. Both the size of the area and the screening offered by the topography increase the opportunity for solitude and primitive recreation. Overall recreational use of the area is relatively limited and dispersed, so that encounters with other visitors are unlikely. However, recreational use along the trails at times may be moderate and concentrated, so that encounters with other visitors are likely. Because of its large size, there are many opportunities for solitude in this area, however a visitor may have to work harder to find them. The sight or sound of airplanes overhead, boats along the coastlines, motor vehicles on adjacent roads or trails, and the sights and sounds of the community of Sitka can occasionally intrude upon a visitor's solitude.

The area provides a high opportunity for primitive recreation as a result of its size, topographic screening, and physical challenges. This area has a highly irregular topography and diverse vegetation that combine to offer a setting capable of providing a variety of primitive recreation opportunities. There are lakes, ponds, streams, bays, rugged mountains, and a varied coastline that contribute to these opportunities. Although Outfitter/Guide Use was reported in adjacent areas in 1999, no outfitter/guide use was reported within the boundaries of the roadless area itself.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	36,916	32%
Semi-Primitive Non-Motorized (SPNM)	67,961	59%
Semi-Primitive Motorized (SPM)	3,378	3%
Roaded Natural (RN)	413	0%
Roaded Modified (RM)	5,769	5%
Urban (U)	3	0%

The area contains 27 inventoried recreation places, which cover 23,893 acres, or 21 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	5	4,659
SPNM	9	15,299
SPM	4	2,658
RN	5	241
RM	11	1,035
U	0	0

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

Four National Forest System Trails (Beaver Lake Trail, Gavan Hill Trail, Harbor Mountain Ridge Trail, and Indian River Trail) provide access to the area from the Sitka road system. In addition, the Blue Lake River Trail extends 2.5 miles from the east side of Blue Lake to the south end of Glacier Lake. There are no public recreation cabins in the area. There is, however, a survival shelter associated with Gavin Hill Trail.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in

support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Sitka Urban Roadless Area was 19 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 20.

(4) Ecologic and Geologic Values: The Sitka Urban Roadless Area is part of a larger roadless land area that stretches the length of Baranof Island. This area consists of four roadless areas and the South Baranof Wilderness. The four roadless areas that comprise this larger area are North Baranof (#330), Sitka Urban (#331), Redoubt (#333), and Port Alexander (#334).

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) rated two VCUs, Katlian River (313) and Green Lake (324), as primary sportfish producers, and one VCU, Sitka (311), as a primary salmon producer.

The streams and rivers in this area support runs of pink, chum, and coho salmon and Dolly Varden char. Major fish bearing streams include Indian River, Katlian River, and Coxe River (ADF&G, 2000). The Indian River has an estimated annual peak escapement of 50,500 pink salmon and very good coho smolt capability. The Katlian River is second to the Indian River in production, with an estimated annual peak escapement of 12,200 pink salmon and good coho smolt capability. Silver Bay has an estimated annual peak escapement of 11,000 pink salmon (ADF&G, 1998).

(b) Wildlife Resources: There are many varied wildlife resources in this roadless area. Generally, the area provides good habitat for Sitka black-tailed deer, mountain goat, and brown bear. Furbearers such as marten, mink, and river otter may also be found here. Bird and waterfowl rearing and nesting areas are abundant in this area. Bald eagle habitat, including nesting and roosting trees, can be found in this roadless area along the shorelines. MacDonald and Cook (1999) do not list black bear, wolves, or moose as inhabitants of Baranof Island.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Peale’s peregrine falcons pass through the area during their spring and fall migration flights. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, 12 sensitive plant species are known or suspected to occur in the Sitka Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are a few cirque glaciers and small permanent ice fields along the eastern boundary of the area. These glaciers are the southernmost island glaciers in North America.

(5) Scientific and Educational Values: There are no known features of ecologic, geologic, scientific, or cultural significance. There are no Research Natural Areas in this roadless area. The area is adjacent to the city of Sitka and readily accessible to school-age children.

(6) Scenic Values: The visual character type of this roadless area is classified as Baranof Highland. Terrain in this character type consists of an irregular, rugged asymmetrical chain of landforms 2,000-5,300 feet in elevation with a steep eastern slope and a gentler western slope deeply indented with fiords. Generally, landforms are visually massive, bulky, and stark throughout the character type. Shoreline forms are very rugged with steep-sided fiord country on both east and west coasts. Rugged headwalls, cliffs, and escarpments are common on the west side of the Baranof Highland character type, as a result of exposure to the sea wind and waves. Numerous rocky crests, sharp ridges, horns, aretes, and cirques are found at higher elevations. Snow can be seen all year round on the higher summits with cirque glaciers and small permanent ice fields, especially in the eastern portion of the area.

The Sitka Urban Roadless Area in the north central portion of Baranof Island represents the Baranof Highland visual character type well. This area displays a mountain range deeply and repeatedly scalloped by bays and U-shaped valleys. A combination of historic glaciation and erosion from the high level of precipitation has further accentuated the carving of the topography. The mountains of this roadless area form the scenic backdrop to the city of Sitka, and are a feature that attracts both residents and tourists to Sitka.

The area displays natural characteristics when viewed from major and minor water travel routes and when inside the area. Development associated with the community of Sitka dominates the foreground from Sitka Sound. However this roadless area provides a natural background for viewers. The Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Sitka Sound and Starrigaven (Alaska Marine Highway); Sitka Sound (tour ship route); #7576 – Harbor Mountain and FH#11 - Sawmill Creek/Halibut Point (public use roads); Eastern Channel to Silver Bay and Sitka Harbor (small boat routes); Silver Bay, Nakwasina Sound and Sitka Sound (Saltwater Use Areas); Blue Lake (Dispersed Recreation Area); Sitka (Community); Indian River and Gavan Hill (Hiking Trails); and Katlian Bay and Cedar Cove (boat anchorages).

Approximately 37 percent of the roadless area is inventoried Variety Class A (possesses landscape diversity unique for the character type). Approximately 56 percent of this roadless area was inventoried as Visual Variety Class B (possesses landscape characteristics common for the character type) and 7 percent of the area was rated in Variety Class C (possesses a low degree of landscape diversity).

The majority of this roadless area, approximately 85 percent, has an Existing Visual Condition (EVC) I and appears to be untouched by human activity. Approximately 14 percent has an EVC IV, where changes in the landscape are easily noticed by the average person, but it resembles natural patterns. About one percent of the area has an EVC V, where changes to the landscape are obvious to the average visitor and appear to be major disturbances.

(7) Social, Cultural, and Historical Values: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Sitka was established between 2,000 and 9,000 years ago as a major Tlingit Indian village. Goldschmidt and Haas (1946) identified aboriginal use (including hunting/trapping, berrying, salmon, shellfish, and trolling for halibut or King Salmon) and structures along the shoreline of the area, including camps, smokehouse/cabin sites, and village sites. The Russians settled in Sitka in 1799, made it the headquarters of the Russian American Company, and later the capital of Russian America. After sale of Alaska to the United States, Sitka served as the territorial capital until 1900, when the capital was transferred to Juneau. Although the city of Sitka lies outside the Roadless Area, its inhabitants have used the surrounding roadless lands intensively.

Use of the area since 1900 has been primarily for hunting, fishing, woodcutting, recreation, and occasional temporary occupancies. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found.

Recreational use of the area is primarily for hunting, fishing, and enjoying the scenery. This use is scattered across the area, with the usual concentrations near lakes, streams, and shorelines. Although Outfitter/Guide Use was reported in adjacent areas in 1999, no outfitter/guide use was reported within the boundaries of the roadless area itself. Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that six of the eight VCUs located in this area are subsistence use areas with a high sensitivity to disturbance. Four of the VCUs in this area were included among the VCUs with highest community use value (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The Sitka Urban Roadless Area is only partially well defined by topographic features. The north, east, and south boundaries are determined by major watershed divides. The western boundary, however, is a ragged line that follows the boundary of private land and other land ownership, and is also the result of road system and associated activities. This is a poor and difficult boundary to manage. The feasibility of management of this area as wilderness or in an unroaded condition is poor although there is no significant motorized access or other current nonconforming uses. This lower feasibility is due to the heavy influence of the adjacent population center, road system and associated developments, and adjacent land ownership patterns.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: The varied terrain, diverse vegetation, and attractive scenery of this area provide unlimited potential for dispersed recreation. Additional trails or cabins and shelters are possible and could be located so that they are accessible from the Sitka road system or within easy access by boat from Sitka. With the large numbers of visitors to Sitka, use of trails within walking distance of town or the campgrounds would likely be substantial.

In 1996, the Alaska Visitors Association (AVA) proposed the immediate development of hut-to-hut hiking for 25 persons in the Katlian Bay to Rodman Bay corridor and development of all uses in the future (conditional upon road development).

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: No fish habitat improvement projects are planned for the area.

(4) Wildlife Resources: No wildlife habitat improvement projects are planned for the area.

(5) Timber Resources: There are 13,747 acres mapped as productive old growth in the roadless area. There are also 668 acres mapped as second growth where timber harvest has occurred in the past. Of these acres, 5,650 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 550 acres or less than one percent of this roadless area are estimated to be suitable for timber production. Approximately 152 of the suitable acres are mapped as high-volume old growth; of these acres, none are mapped as high-volume, coarse-canopy old growth. The potential for managing timber in this roadless area is dependent on higher market values.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present in the area. There are no known epidemic disease occurrences.

(7) Minerals: The southwestern portion of the area contains a zone of high mineral development potential with veins of valuable metallic or nonmetallic minerals. The central portion of the area contains a large zone of magmatic oxide or sulfide deposit. There are no known current claims. The USGS Mineral Resource Data website (2001) indicates that there are 26 prospects for chromium, copper, gold, silver, lead, tungsten, or nickel in this roadless area.

This area contains 8,618 acres of land identified as a mineral activity tract having a low potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). In addition, this area contains an estimated 23,757 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have low potential for development.

(8) Transportation and Utilities: A proposed state road corridor and a potential power transmission corridor that run through sections of this area were assigned to the Transportation and Utility System LUD in the 1997 Tongass Land and Resource Management Plan. This proposed road corridor was not included in the 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999). Additional roads would be needed to access timber resources in those areas where the Forest Plan allows timber management.

(9) Water Availability and Use: There are no developed recreation cabins located within the roadless area and no other facilities exist to create water demand. However, a quarter of the land in this roadless area is allocated to the municipal watershed LUD and is managed on behalf of the city of Sitka. In addition, the Bear Lake hydroelectric power facility is located within the roadless area.

(10) Areas of Scientific Interest: There are no known areas of scientific interest in this roadless area.

(11) Land Use Authorizations: Special use permits associated with the municipal watershed and hydropower will continue.

(12) Land Status: All land within the roadless area is part of the National Forest System. Two small areas of encumbered lands within the roadless area are located in the northwest.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Most use of the area is associated with recreational boating, hunting and fishing, and viewing wildlife and scenery of the area.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Sitka Urban Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also proposed that the areas along the coastline be assigned Wild and Scenic River status. The areas where timber harvest has occurred were identified for protection as Restoration Areas.

(c) Public Input During Forest Plan Revisions and Appeals: Parts of this area were specifically addressed in public input received during the Forest Plan revision and appeal. Katlian, Silver Bay, and Nakwasina Sound were included in a list of areas that are strategically important to Sitka for subsistence uses (and most also for recreation) and deserve protection. The Sitka Conservation Society (SCS) noted that all of the VCUs on the Hoonah Sound to Sitka ferry route should be managed for Semi-Primitive (Semi-Remote) Recreation. They also requested that two of the eight VCUs located within the Sitka Urban Roadless Area be managed under a Primitive Recreation LUD. They identified these VCUs along with other nearby areas to be "at the heart of Sitka's economy and lifestyle". The AVA proposed the immediate development of hut-to-hut hiking for 25 persons in the Katlian Bay to Rodman Bay corridor and development of all uses in the future (conditional upon road development). Another commenter identified five of the 8 VCUs within the area as areas that should be managed for timber production. One commenter recommended that North Baranof Island, Nakwasina Sound and Passage, and Katlian Bay be managed for a local wood products industry. Timber industry representatives requested that Management Areas (MAs) C46 and C48 be entirely assigned to the Timber Production LUD. They also requested that the portion of MA C40 within the Sitka Urban Roadless Area be assigned to the Timber Production LUD. Other commenters requested that logging not be permitted in MAs C40 and C46.

The appeal filed by the Southeast Alaska Conservation Council (SEACC) expressed concern that while the immediate shoreline and parts of the uplands of Nakwasina Sound (VCUs 299 and 301) are protected, "most of the uplands are still open to intensive development". The SEACC appeal also identified one of the VCUs in the area (VCU 324) as part of the Sitka Local Use Area and objected to parts of this area still being "open to clearcutting." Parts of the area were also specifically identified in the Forest Plan appeal filed by the SCS, which, among other things, objected to inclusion of a number of places in the Sitka area in the "timber base." These places included an area they identified as Nakwasina, which likely includes part of the Sitka Urban Roadless Area. The SCS also requested that the Baranof coastal tidal river system, which also includes part of the Sitka Urban Roadless Area, be given Wild and Scenic River designation because it is a rare resource that would be more valuable over time than logging the same area would be.

The appeal filed by the Hoonah Indian Association et al., requested that logging not be permitted along the "stretch of lands and islands on both sides of the various narrows that span from Sitka Sound to Hoonah Sound" because the subsistence harvest of deer in this area "already exceeds the sustainable hunting level by a wide margin" and logging would exacerbate this situation.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area is not within the study area of any recently completed project-level EISs.

(f) Public Input Expressed During Supplemental EIS Process: SEACC included this area in a contiguous complex of roadless areas consisting of Roadless Areas 330, 331, 332, and 333. They recommend this complex for permanent protection as LUD II. The combined area represents just over 500,000 acres. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 330, 331, 332, and 333 as a contiguous complex of roadless areas that should be considered one roadless area and recommended it for permanent protection as LUD II.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

(2) Nearby Roadless and Wilderness Areas and Uses: There are three existing wilderness areas located in proximity to the Sitka Urban Roadless Area. The South Baranof Wilderness borders the area to the south. The West Chichagof-Yakobi Wilderness lies approximately 14 miles northwest of the area. The Admiralty Island National Monument-Kootznoowoo Wilderness lies approximately 15 miles east.

The Sitka Urban Roadless Area is part of a larger roadless land area that stretches the length of Baranof Island. This area consists of four roadless areas and the South Baranof Wilderness. The four roadless areas that comprise this larger area are North Baranof (#330), Sitka Urban (#331), Redoubt (#333), and Port Alexander (#334).

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	80	160
Sitka (Pop. 8,835)	1	1
Hoonah (Pop. 860)	60	140
Angoon (Pop. 572)	30	80

The nearest stop on the Alaska Marine Highway is Sitka.

(4) Relative Contribution to the National Wilderness Preservation System: The Sitka Urban Roadless Area is located on the west side of Baranof Island, just north of the center of the island. Sitka and Nakwasina Sounds generally border the area to the west. The roadless area is, however, for the most part separated from saltwater by private lands that are part of the Sitka developed area and extend along the shoreline. The Redoubt Roadless Area (#333) and South Baranof Wilderness border the area to the south. The North Baranof Roadless Area (#330) borders the area to the north and east. The Sitka Urban Roadless Area is generally characterized by an irregular, rugged chain of mountains 2,000 to 5,300 feet in elevation. Numerous rocky crests and sharp ridges are found at higher elevations. Snow can be seen all year round on higher summits with a few cirque glaciers and small permanent ice fields along the eastern boundary of the area. Small mountain lakes are plentiful.

The area is natural appearing and provides a backdrop for the urban area of Sitka. The area has high natural integrity and moderate to high apparent naturalness. There is a high opportunity for solitude and a very high opportunity for primitive recreation within the area.

The Sitka Urban Roadless Area has moderate to high scenic quality; approximately 37 percent of the landscape is considered distinctive from a scenery standpoint. In addition to providing a scenic backdrop for Sitka, the area includes some small cirque glaciers and permanent icefields.

The roadless area includes about 3,360 acres of high-volume, old-growth forest. Of these acres, approximately 42 are mapped as high-volume, coarse-canopy old growth.

The Sitka Urban Roadless Area is classified as being in the West Baranof Island Biogeographic Province and makes up about 14 percent of the province. It is one of eight inventoried roadless areas found within the province that make up about 62 percent of the province. The majority of the South Baranof Wilderness is also within this province and makes up approximately 29 percent of the province.

The Sitka Urban Roadless Area lies completely within the Baranof-Chichagof Fjordlands Ecological Section. This portion represents 5 percent of the entire ecological section, which is well represented in existing wilderness (28 percent) and other non-development LUDs (35 percent) with an additional 13 percent in LUD II.

The majority of this roadless area (87 percent) is located in the Central Baranof Metasediments Ecological Subsection. This portion of the roadless area represents 28 percent of the entire ecological subsection, which has approximately 20 percent existing wilderness and is well represented by other non-development LUDs (64 percent). The Sitka Sound Complex Ecological Subsection represents 13 percent of this roadless area. This portion of the roadless area represents 8 percent of the entire ecological subsection, which is well represented by non-development LUDs (67 percent), but not by wilderness or LUD II. The Necker Bay Granitics represents less than 1 percent of the Sitka Urban Roadless Area. This portion of the roadless area represents 0.3 percent of the entire ecological subsection, which is well represented by existing wilderness (83 percent) with an additional 16 percent in other non-development LUDs.

The Sitka Urban Roadless Area was rated 20 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its rating is ranked 53rd from the highest (along with 16 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing this area in an unroaded condition, and little support for designation as wilderness. Designation of the area would add Congressional protection to 8 percent of the Sitka Sound Complex Ecological Subsection; this subsection does not contain any areas under long-term Congressional protection. Designation would create a large wilderness heavily influenced by the proximity of Sitka. Overall, the factors identified here indicate that the relative contribution to the National Wilderness Preservation System would be moderate.

V. Environmental Consequences

The Sitka Urban Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 81 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 19 percent of the roadless area. The land in the development LUDs includes an estimated 550 acres that are suitable for timber production (1 percent of the suitable acres on the Sitka Ranger District). None of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 8,618 acres of land identified as a mineral activity tract having a low potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains approximately 23,757 acres of undiscovered locatable mineral resources. All of these acres are considered to have low potential for development. The relatively high recreation use and special use permits would continue. There is a potential road and powerline corridor that crosses the island from Sitka and goes through the roadless area. Planning for the corridor is not active at this time. The values associated with the natural settings of the roadless area could be affected by ongoing developments in adjacent areas and in the few areas where the Forest Plan allows developments for timber management. The high scenic values of the roadless area are protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and recreation use and developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the high scenic values, would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to 8 percent of the Sitka Sound Complex Ecological Subsection, which is not represented by any areas under long-term Congressional protection.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed and the potential for other development, including recreation and mineral, could be significantly restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The

values associated with the natural settings of the roadless area, including the high scenic values, would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to 8 percent of the Sitka Sound Complex Ecological Subsection, which does not contain any areas under long-term Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 331 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								114,460
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation	3,117	3,117	3,117	3,117	3,117		3,117	
Enacted Municipal Watershed	28,625	28,625	28,625	28,625	28,625		28,625	
Old-growth Habitat	2,435	2,435	2,435	2,435	2,435		2,435	
Semi-remote Recreation	59,421	59,421	59,421	59,421	59,421		59,421	
Recommended LUD II						114,460		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	3,001	3,001	3,001	3,001	3,001		3,001	
Timber production	17,862	17,862	17,862	17,862	17,862		17,862	
TOTAL	**114,460**	**114,460**	**114,460**	**114,460**	**114,460**	**114,460**	**114,460**	**114,460**
Suitable Timber Lands	550	550	550	550	550	**0**	550	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Sitka Sound (332)

ACRES (NFS): 20,878

BIOGEOGRAPHIC PROVINCE: West Baranof Island

ECOLOGICAL SECTION: Baranof-Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 20

I. Overview and Description

(1) Location and Access: This area, generally located between Sitka Sound and Salisbury Sound, and between Kruzof Island and Baranof Island, is comprised of Krestof Island, Halleck Island, the Siginaka Islands, and a number of small offshore islands and rocks. The area also includes a peninsula on Baranof Island that is separated from the remainder of the island by a road system and timber harvest units. This unnamed peninsula has been named Whitestone Peninsula for the purposes of this roadless area description after Whitestone Cove located at the southern end of the peninsula.

The islands located in this area are surrounded by saltwater on all sides. Olga Strait separates Krestof and Halleck Islands, the two major islands in the area. Whitestone Peninsula, located directly across Nakwasina Passage from Krestof and Halleck Islands, is partially bordered by St. John Baptist Bay to the north. Areas developed for timber management form the remaining part of the area's north border, as well as bordering the area to the east. Neva Strait borders the area to the west. The city of Sitka is located immediately south of the area.

The closest large community on the Alaska Marine Highway and with air Service is Sitka, approximately 10 miles south. The primary form of access to the area is via boat and floatplane on saltwater along all of the coastlines. The numerous bays and channels within and surrounding this area provide travel corridors and sheltered anchorage for boats. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Use of the area has been primarily for hunting, fishing, recreation, and temporary occupancy. Remains of structures and other human cultural activity can still be found in varying degrees of deterioration. Goldschmidt and Haas (1946) identified a former village and indicated that hunting or trapping historically occurred on the islands.

(3) Geography and Topography: The area is comprised of Whitestone Peninsula, two moderate size islands (Halleck and Krestof Islands), and numerous small islands, island groups, and offshore rocks. Whitestone Peninsula is a roughly triangular shaped piece of land of gentle slope with a maximum elevation of just over 1,400 feet. It contains no streams or lakes of significant size. Halleck and Krestof Islands are both irregularly shaped, with a mix of gentle and steep sloped terrain. Krestof Island is further defined by Promisla and De Groff Bays. Maximum elevations on Krestof and Halleck Islands are over 1,600 feet and 1,900 feet, respectively. There are no lakes or named streams on either island. The small islands in the Sitka Sound Roadless Area are mostly less than 100 feet in elevation and are scattered throughout the area. They are all irregular in shape and size.

There are 88 miles of shoreline along saltwater, 228 acres of alpine tundra, 5 acres of ice and snow, and 109 acres of rock. The majority of the area is on islands including many small islands located along the coastline for a total of 16,098 acres.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the West Baranof Island Biogeographic Province. Topographically, Baranof Island is the most rugged of all the islands in Southeast Alaska. The outer coast of this province is dotted with hundreds of small islands. All forest plant associations except those in the Western redcedar series and those found around large mainland rivers occur in this province.

Ecological Section/Subsection. The Sitka Urban Roadless Area is contained entirely within the Baranof-Chichagof Fjordlands Ecological Section (M247B). This area is represented by one ecological subsection (see table below). The Sitka Sound Ecological Subsection is mostly covered in a blanket of ancient volcanic ash approximately 2 to 6 feet deep. Where the ash has been washed away, Sitka graywacke, granite, and low-grade metamorphic rocks are exposed. The Sitka Sound Complex Ecological Subsection is considerably lower in elevation relative to the surrounding subsections and there are no glaciers, although there are some permanent snowfields. Mixed conifer and hemlock-spruce forests dominate the lower elevations and shorelines, and forested wetlands of lodgepole pine and mixed conifer are abundant (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Baranof-Chichagof Fjordlands	Sitka Sound Complex	100%

(b) Soils: Shallow mineral soils with good drainage can be found on steeper slopes due to rapid loss of material by erosion and efficient rainwater runoff. Deep, well-drained soils commonly occur below the shallow soils on the gentler slopes where transported soil materials have collected. Poorly drained soils are found associated with low relief and impermeable subsurface layers. In locations with poor drainage, deep organic soils (muskegs) tend to form. In riparian areas, soil zones tend to contain sand and gravels as a result of flood deposition. Soils are influenced by layers of ash deposits resulting from eruptions of Mount Edgecumbe located to the southwest.

(c) Vegetation: The vegetation of this roadless area consists primarily of typical spruce-hemlock forests. Western hemlock-Sitka spruce dominate the overstory while the understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Muskegs are abundant within this area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Approximately 393 acres of muskeg are mapped for the area. These areas, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low elevation timber stands where drainage is restricted. Trees within the muskegs are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar.

There are approximately 20,018 acres mapped as forest land, of which 10,260 acres or 51 percent are mapped as productive old-growth forest. Of the productive old growth, 2,298 acres or 22 percent are mapped as high-volume old-growth forest. The productive old growth includes about 6 acres of high-volume, coarse-canopy old growth. The area also includes 679 acres of second growth where beach harvest has occurred in the past.

(d) Fish Resources: The Anadromous Waters Catalogue and Atlas (ADF&G, 2000) identifies 10 unnamed Class I streams in this area. These streams provide habitat for coho, pink, and chum salmon, cutthroat trout, and Dolly Varden char.

(e) Wildlife Resources: There are many varied wildlife resources in this roadless area. Generally, the area provides good habitat for Sitka black-tailed deer and brown bear. Furbearers such as mink,

marten, and river otter are also present on Baranof Island. Mountain goats inhabit Baranof Island, however they have not been reported in this roadless area. Moose, wolves, and black bear are not present on Baranof Island. Bird and waterfowl rearing and nesting areas are abundant in this area. Bald eagle habitat, including nesting and roosting trees, can be found along the shorelines of this roadless area.

(5) Management Direction and Current Uses: This roadless area was allocated to three Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These are Timber Production, Scenic Viewshed, and Semi-Remote Recreation.

LUD	Acres
Timber Production	2,666
Scenic Viewshed	190
Semi-Remote Recreation	18,021

Approximately 14 percent of the roadless area was allocated to a development LUD (Timber Production, Scenic Viewshed). The Timber Production LUD was assigned to approximately 13 percent of the roadless area. The majority of the Whitestone Peninsula portion of this roadless area was allocated to the Timber Production LUD. A small adjacent area along the south shore of St. John Baptist Bay was allocated to the Scenic Viewshed LUD, accounting for approximately one percent of the roadless area.

Most of the roadless area, 86 percent, was allocated to one non-development LUD, Semi-Remote Recreation. Smaller islands associated with this roadless area are allocated to the Semi-Remote Recreation LUD as well.

Recreational use of the area is primarily for hunting and fishing, and enjoying the scenery. This use is scattered across the area, with the usual concentrations near lakes, streams, and shorelines. Subsistence use occurs in the area. The Allen Point Cabin and Trail are located on Halleck Island.

(6) Appearance (Apparent Naturalness): The majority of the area is considered unmodified. Exceptions include those areas primarily located near the shoreline with evidence of current or historic use. Historic use includes beach logging that has occurred on Krestof Island on either side of De Groff Bay, as well as along the west shoreline. Beach logging has also occurred along the north and east shore of Halleck Island. In addition, beach logging has occurred in two small areas on the Whitestone Peninsula. The northeastern boundary of the roadless area on Whitestone Peninsula is defined by developed areas. The area generally appears natural when viewed from major travel routes or use areas.

(7) Surroundings (External Influences): The area is composed of islands in Sitka Sound and the Whitestone Peninsula (which is bordered by salt water on three sides). As a result, external influences on those sides are primarily limited to the sights and sounds of motorized boats. The Alaska Marine Highway passes through Neva Strait and Olga Strait in this roadless area. The northeastern boundary of Whitestone Peninsula adjoins a developed area. However, this development has had only local impact on this roadless area. The Magoun Islands State Marine Park is located immediately west of Krestof Island. Air traffic passing overhead to and from the Sitka Airport is another external influence.

(8) Attractions and Features of Special Interest: The major attraction of the Sitka Sound Roadless Area is the islands themselves. Sitka is known for the numerous islands lying off shore in Sitka Sound. Ferries traveling the Alaska Marine Highway pass through Neva Strait and Olga Strait on their way to and from Sitka. As a result, Whitestone Peninsula and the islands that comprise this area are seen by many visitors to Sitka.

The area contains nine inventoried recreation places, which cover 10,113 acres, or 48 percent of the roadless area. The natural features of the area, the scenery, and the opportunity to see wildlife are all considered attractions. High quality fishing opportunities in the streams and lakes also provide attractions. There is one National Forest System Trail and recreation cabin at Allen Point on Halleck Island.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of this roadless area changed in two main ways between 1989 and 2003. First, the Magoun Islands, which were included within the boundary of the 1989 area, are now part of the state-owned Magoun Islands State Marine Park. Second, the beach

logged areas on Krestof and Halleck Islands and Whitestone Peninsula, described in Section I.(5) above and excluded from the area in 1989, are included within the boundaries of the 2003 area.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified except for the evidence of current and historic use. This evidence, which includes beach logging, although locally noticeable, has a very low overall effect on the natural integrity of the area. Both the relative size of the developments and their location along the shoreline contribute to this low impact. Natural ecological processes and conditions continue to exist in the area. Overall, the area's natural integrity and apparent naturalness is very high and is suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a moderate opportunity for solitude and primitive recreation within the area. Recreational use of the area is relatively limited and dispersed, so that encounters with other visitors are unlikely. The sight or sound of airplanes overhead and boats along the coastlines can occasionally intrude on a visitor's solitude. Along Neva Strait and Olga Strait, ferries of the Alaska Marine Highway system and other commercial and private traffic can be observed or heard.

The area provides a moderate opportunity for primitive recreation as a result of its dense vegetative screening, and physical challenges. This area has a unique topography and diverse vegetation that combine to offer a setting capable of providing a variety of primitive recreation opportunities. There are ponds, streams, bays, mountains, and a varied coastline that contribute to these opportunities.

Outfitter/guide use was reported at five locations in and around this area in 1999. Sixteen groups with a total of 136 clients were reported visiting the area. Reported uses included camping, brown bear hunting, and hiking. Camping was the most popular activity accounting for 14 of the 16 groups in 1999. Popular locations included Allan Point on Halleck Island and De Groff Bay on Krestof Island.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	11,886	57%
Semi-Primitive Motorized (SPM)	3,656	18%
Roaded Natural (RN)	2,901	14%
Roaded Modified (RM)	2,391	11%

The area contains nine inventoried recreation places, which cover 10,113 acres, or 48 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	1	2,842
SPM	3	2,404
RN	3	2,716
RM	3	2,142

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There is one National Forest System trail in the area associated with the Allen Point Recreation Cabin on Halleck Island, which further enhances the opportunity for recreation.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of

this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Sitka Sound Roadless Area was 18 out of 28 possible points. A smaller portion of the area was rated separately and received a score of 20. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 20. The higher rating reflects the minimal effects of the older beach logging that was considered developed in the earlier rating. These areas have little effect on the natural integrity of the area, especially as they have continued to mature.

(4) Ecologic and Geologic Values: This area consists of the Whitestone Peninsula, Krestof Island, Halleck Island, the Siginaka Islands, and a number of small offshore islands and rocks. It is not part of a larger roadless area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list any of the VCUs in this area as primary salmon or sportfish producers.

The Anadromous Waters Catalogue and Atlas (ADF&G, 2000) identifies 10 unnamed Class I streams in this area. These streams provide habitat for coho, pink, and chum salmon, cutthroat trout and Dolly Varden char.

(b) Wildlife Resources: There are many varied wildlife resources in this roadless area. Generally, the area provides good habitat for Sitka black-tailed deer and brown bear. Based on harvest data compiled from 1985 to 1995, one VCU in the area, Neva Strait (302), was ranked in the third 25 percent of brown bear harvest areas on the Tongass (ADF&G, 1998). Furbearers such as mink, marten and river otter are also present on Baranof Island. Mountain goats reportedly inhabit Baranof Island, but they have not been reported in this roadless area. Moose, wolves, and black bear are not present on Baranof Island. Bird and waterfowl rearing and nesting areas are abundant in this area. Bald eagle habitat, including nesting and roosting trees, can be found along the shorelines of this roadless area.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, 12 sensitive plant species are known or suspected to occur in the Sitka Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are no glaciers or unique geologic features.

(5) Scientific and Educational Values: There are no known features of ecologic, geologic, scientific, or cultural significance. There are no Research Natural Areas located in this area. The area is adjacent to the city of Sitka and, therefore, readily accessible to school-age children.

(6) Scenic Values: The visual character type of this roadless area is classified as Baranof Highland. Terrain in this type consists of an irregular, rugged asymmetrical chain of landforms having a steep eastern slope and a gentler western slope deeply indented with fjords. Generally, landforms are visually massive, bulky and stark throughout the character type. Shoreline forms are very rugged with steep-sided fjord country on both east and west coasts.

Rugged, headwalls, cliffs and escarpments are common on the west side of the Baranof Highland character type, as a result of exposure to the sea wind and waves. Rock faces are sometimes visible on steep-sided fjords near saltwater throughout the unit. The Sitka Sound Roadless Area is a poor example of this visual character class as it has few of the described features, or the features are limited or poorly representative.

Evidence of historic use in the area includes old cabins and other historic occupancies. Historic use also includes beach logging that has occurred on Krestof Island on either side of De Groff Bay, as well as along the west shoreline. Older beach logging has also occurred along the north and east shore of Halleck Island. In addition, logging has occurred in two small areas on the Whitestone Peninsula. The northeastern boundary of the roadless area on Whitestone Peninsula is defined by developed areas. Current use includes various short term occupancies and other uses of the area and surrounding waters. Although locally noticeable, this evidence has a very low overall effect on the natural integrity of the area. Both the relative size of the developments and their location along the shoreline contribute to this low impact. The area generally appears natural when viewed from major travel routes or use areas. A number of Visual Priority Routes and Use Areas identified by the Forest Plan are within or adjacent to this area. Visual Priority Routes include Neva Strait, Olga Strait, and Sitka Sound (Alaska Marine Highway), and Sitka Sound, St. John Baptist Bay, Sitka Ferry terminal to Katlian Bay, Nakwasina Strait/Passage, Olga Strait, Hayward Strait to Peril Strait, and Neva Strait to Salisbury Sound (small boat routes). Use Areas include Magoun Islands (State Marine Park and Dispersed Recreation Area), Nakwasina Sound and Inlet, Krestof Island, south shore from Brady Island to Eastern Point, and Olga Strait (Saltwater Use Areas), and De Groff Bay and Whitestone Cove (boat anchorages).

About 4 percent of the area is inventoried in Variety Class A (possessing landscape diversity unique for the character type). About 11 percent of the area is in Variety Class B (possessing landscape characteristics common for the character type). Approximately 83 percent of this roadless area was inventoried in Visual Variety Class C (possessing a low degree of landscape diversity). Approximately 3 percent of the area was not inventoried for Variety Class type.

Over half of this roadless area, approximately 58 percent, was inventoried as having an Existing Visual Condition (EVC) I, where areas appear to be untouched by human activity. About one percent of the area is in EVC III, where the average person notices changes in the landscape, but they do not dominate the landscape. Twenty-five percent of the roadless area was inventoried as EVC IV, where changes in the landscape are easily noticed by the average person, but it resembles natural patterns. Approximately 13 percent of the area is in EVC V, where changes in the landscape are obvious to the average person and appear to be major disturbances. Approximately 3 percent of the area was not inventoried for EVC.

(7) Social, Cultural, and Historical Values: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Use of the area has been primarily for hunting, fishing, recreation, and temporary occupancy. Remains of structures and other human cultural activity can still be found in varying degrees of deterioration. Goldschmidt and Haas (1946) identified a former village and indicated that hunting or trapping historically occurred on the islands. The city of Sitka is located directly south of the Sitka Sound Roadless Area.

Based on harvest data compiled from 1985 to 1995, VCU 302-Neva Strait was ranked in the third 25 percent of brown bear harvest areas on the Tongass (ADF&G, 1998). Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment identified all the VCUs in this area as subsistence use areas with a high sensitivity to disturbance. All four of the VCUs in this area were also listed among the VCUs with highest community use value (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The Sitka Sound Roadless Area is generally well defined by topographic features. All areas, but one, are islands that have their boundaries determined by their shorelines. The one exception is the Whitestone Peninsula, which is bordered to the northeast by developed areas. The feasibility of management of this area as wilderness or in an unroaded condition is good as there is no significant motorized access or other current nonconforming uses.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: The varied terrain, diverse vegetation, and attractive scenery of this area provide unlimited recreation potential for dispersed recreation. Additional trails and cabins or shelters are possible. The Alaska Visitors Association (AVA) proposed recreation developments in the general vicinity of Neva Strait and St. John Baptist Bay.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: No fish enhancement projects are planned for this roadless area.

(4) Wildlife Resources: Some of the older beach logged areas have tree regrowth that is becoming very dense and shading out understory vegetation. There are some limited opportunities in this area to thin some of these regrowth areas to improve existing and future wildlife habitat values. Beach fringe areas with southern aspects can be especially important wintering areas for Sitka black-tailed deer and other wildlife.

(5) Timber Resources: There are 10,260 acres mapped as productive old growth in the roadless area. There are also 679 acres of second growth where timber harvest has occurred in the past. Of these acres, 8,434 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 486 acres or 2 percent of this roadless area are estimated to be suitable for timber production. Approximately 77 of the suitable acres are mapped as high-volume old growth; of these acres, none are mapped as high-volume, coarse-canopy old growth. This portion of the area is located on the Whitestone Peninsula, near the existing road system and harvest units that border the area to the north (partially) and east.

The potential for managing timber in this roadless area is dependent on higher market values. Designating this area wilderness would not affect potential timber harvest in adjacent areas.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present in the area. There are no known epidemic disease occurrences.

(7) Minerals: The area does not have a high mineral development potential and there are no known claims. The USGS Mineral Resource Data website (2001) indicates that there is one explored prospect for gold on Halleck Island. This area contains 10,054 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have low potential for development.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area. Roads would be needed to access timber in those areas that allow timber management in the Forest Plan.

(9) Water Availability and Use: There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: There are no known areas of scientific interest in the roadless area.

(11) Land Use Authorizations: There are special use permits for shore ties on Krestof Island.

(12) Land Status: The area consists entirely of National Forest System lands.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Most use of the area is associated with recreational boating, hunting and fishing, and viewing the wildlife and the scenery of the area.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Sitka Sound Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also proposed that the shoreline of the Whitestone Peninsula portion of the area be protected under Wild and Scenic River designation. The areas where timber harvest has occurred on Halleck and Krestof Islands were identified for protection as Restoration Areas.

(c) Public Input During Forest Plan Revisions and Appeals: Parts of this area were specifically addressed in public input received during the Forest Plan revision and appeal. Nakwasina Sound, which borders Halleck Island to the east, was included in a list of areas that are considered strategically important to Sitka for subsistence uses (and most also for recreation) and deserve protection. The Sitka Conservation Society (SCS) requested that all VCUs on the ferry route, Hoonah Sound to Sitka, should be in the Semi-Remote Recreation LUD, except Halleck and Krestof Islands, which should be managed under the Remote Recreation LUD. The SCS considers these islands along with other nearby areas to be "at the heart of Sitka's economy and lifestyle". The Southeast Alaska Conservation Council (SEACC) identified Nakwasina and Halleck Island as an area "meriting special management protection" for their outstanding wildlife, fisheries, hunting, fishing, subsistence, recreation, and tourism values.

Angoon requested that roads, logging, and mining not be permitted on the Whitestone Peninsula because of their potential effect on subsistence use. The Sierra Club Juneau Group stated that Management Areas (MAs) C40, C44, and C46, which include the Sitka Sound Roadless Area, should have no further logging until its impact on "our resource of the future, tourism" is fully assessed. Timber industry commenters requested that these MAs be managed under the Timber Production LUD, with the exception of a Modified Landscape LUD buffer along Neva and Olga Straits. Another commenter recommended that Nakwasina Sound and Passage be managed for a local wood products industry. One commenter identified the VCUs that comprise the area as areas that should be managed for timber production. The AVA proposed recreation developments in the general vicinity of Neva Strait and St. John Baptist Bay.

Parts of the area were also specifically identified in the Forest Plan appeal filed by the SCS, which, among other things, objected to inclusion of a number of places in the Sitka area in the "timber base." These places included an area they identified as Nakwasina, which likely includes part of the Sitka Sound Roadless Area. The SCS also requested that the Baranof coastal tidal river system, which also likely includes part of the Sitka Sound Roadless Area, be given wild and scenic river designation because it is a rare resource that would be more valuable over time than logging the same area would be. The Forest Plan appeal filed by SEACC identified three of the VCUs that comprise the area as part of the Sitka Local Use Area, a "SEACC Special Area," where clearcutting should not be permitted. The appeal filed by the Hoonah Indian Association et al. expressed the concern that logging should not be permitted along the stretch of lands and islands on both sides of the various narrows that span from Sitka Sound to Hoonah Sound because the subsistence harvest of deer in this area "already exceeds the sustainable hunting level by a wide margin" and logging would exacerbate this situation.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area is not within the study area of any recently completed project-level EISs.

(f) Public Input Expressed During Supplemental EIS Process: SEACC included this area in a contiguous complex of roadless areas consisting of Roadless Areas 330, 331, 332, and 333. They recommended this complex for permanent protection as LUD II. The combined area represents just over 500,000 acres. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 330, 331, 332, and 333 as a contiguous complex of roadless areas that should be considered one roadless area and recommended it for permanent protection as LUD II.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

A number of individuals recommended permanent protection for this area.

(2) Nearby Roadless and Wilderness Areas and Uses: The nearest wilderness is the West Chichagof-Yakobi Wilderness, which lies north of Salisbury Sound. Two other nearby wildernesses are the Admiralty National Monument Wilderness, which lies east of Chatham Strait, and the South Baranof Wilderness south of Sitka.

Nearby roadless areas include North Kruzof (#326), Middle Kruzof (#327), and South Kruzof (#329), all located on Kruzof Island, immediately west of the area. North Baranof (#330) and Sitka Urban (#331) lie on Baranof Island, east across Neva Strait and Sitka Sound from the area.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	85	150
Sitka (Pop. 8,835)	10	10
Hoonah (Pop. 860)	60	125
Angoon (Pop. 572)	35	70

The nearest stop on the Alaska Marine Highway is Sitka.

(4) Relative Contribution to the National Wilderness Preservation System: The Sitka Sound Roadless Area, generally located between Sitka Sound and Salisbury Sound, and between Kruzof Island and Baranof Island, is comprised of Krestof Island, Halleck Island, the Siginaka Islands, and a number of small offshore islands and rocks. The area also includes a peninsula on Baranof Island that is separated from the remainder of the island by a road system and timber harvest units. The peninsula is a roughly triangular shaped piece of land of gentle slope with a maximum elevation of just over 1,400 feet. Halleck and Krestof Islands are both irregularly shaped, with a mix of gentle and steep sloped terrain. Krestof Island is further defined by Promisla and De Groff Bays. Maximum elevations on Krestof and Halleck Islands are over 1,600 feet and 1,900 feet, respectively. The small islands in the Sitka Sound Roadless Area are mostly less than 100 feet in elevation and are scattered throughout the area.

The area is unmodified and natural appearing except where older beach logging has occurred. The area has very high natural integrity and apparent naturalness. The opportunity for solitude and primitive recreation is moderate.

Approximately 4 percent of the landscape is considered distinctive from a scenery standpoint. The area has no other outstanding or unique features.

The roadless area includes about 2,298 acres of high-volume, old-growth forest. Of these acres, about 6 are mapped as high-volume, coarse-canopy old growth.

The Sitka Sound Roadless Area is classified as being in the West Baranof Island Biogeographic Province and makes up about 3 percent of the province. It is one of eight inventoried roadless areas found within the province that make up about 62 percent of the province. The majority of the South Baranof Wilderness is also within this province and makes up approximately 29 percent of the province.

The Sitka Sound Roadless Area lies completely within the Baranof-Chichagof Fjordlands Ecological Section. This portion represents 1 percent of the entire ecological section, which is well represented in existing wilderness (28 percent) and other non-development LUDs (35 percent) with an additional 13 percent in LUD II.

This roadless area is located completely within the Sitka Sound Complex Ecological Subsection. This portion represents 11 percent of the entire ecological subsection, which is well represented by non-development LUDs (67 percent), but is not protected in wilderness or LUD II.

The Sitka Sound Roadless Area was rated 20 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 53rd from the highest (along with 16 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the Sitka Sound Roadless Area as unroaded, but very little support for designating it as wilderness. Designation would create a wilderness heavily influenced by its proximity to Sitka and with few outstanding or unique values or features. Overall, the factors identified here indicate that the relative contribution to the National Wilderness Preservation System would be low to moderate.

V. Environmental Consequences

The Sitka Sound Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 86 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 14 percent of the roadless area. The land in the development LUDs includes an estimated 486 acres that are suitable for timber production (1 percent of the suitable acres on the Sitka Ranger District). None of the suitable acres are mapped as high-volume, coarse-canopy old growth. This area contains 10,054 acres of undiscovered locatable mineral resources; all of which are considered to have low potential for development. The relatively high recreation use and special use permits would continue. The values associated with the natural settings of the roadless area could be affected in the northern peninsula area by ongoing developments allowed by the Forest Plan. These values, including scenic values, are protected by the Forest Plan for most of the roadless area.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and recreation use and developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the scenic values, would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to 11 percent of the Sitka Sound Complex Ecological Subsection, which does not contain any areas under long-term Congressional protection.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed and the potential for other development, including recreation and mineral, could be significantly restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic values, would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to 11 percent of the Sitka Sound Complex Ecological Subsection, which does not contain any areas under long-term Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 332 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								20,878
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat								
Semi-remote Recreation	18,021	18,021	18,021	18,021	18,021		18,021	
Recommended LUD II						20,878		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	190	190	190	190	190		190	
Modified Landscape								
Timber production	2,666	2,666	2,666	2,666	2,666		2,666	
TOTAL	**20,878**	**20,878**	**20,878**	**20,878**	**20,878**	**20,878**	**20,878**	**20,878**
Suitable Timber Lands	486	486	486	486	486	**0**	486	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Redoubt (333)

ACRES (NFS): 74,570

BIOGEOGRAPHIC PROVINCE: West Baranof Island

ECOLOGICAL SECTION: Baranof-Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 21

I. Overview and Description

(1) Location and Access: The area is located on the west side of Baranof Island, approximately half way between the north and south ends of the island. The South Baranof Wilderness borders the area to the south. The open Pacific Ocean and Sitka Sound border the area to the west and northwest, respectively. The community of Goddard also borders the area to the west. The Sitka Urban Roadless Area (#331) borders the area to the northeast. This roadless area includes a main section on Baranof Island and a secondary section comprised of numerous offshore islands. These islands range in size from bare rocks that hardly stick out of the ocean at high tide to larger islands, such as Gornoi Island. The city of Sitka, located approximately 5 miles north, is the closest larger-sized community to the area and is serviced by Alaska Marine Highway and regularly scheduled flights.

The primary form of access to the area is via saltwater, with most people arriving by boat from Sitka. There is also some floatplane access, especially on Redoubt Lake in the center of the area. There are a number of bays that provide sheltered anchorage for boats and several lakes accessible by floatplane. There are no places suitable for landing wheeled airplanes.

There is one National Forest System Trail within the area. The Salmon Lake-Redoubt Lake Trail, 5.9 miles in length, extends from the head of Silver Bay to the public recreation cabin at the northeast end of Redoubt Lake. Several non-National Forest System trails branch off the Salmon Lake-Redoubt Lake Trail and lead up Salmon Creek. One of these non-system trails leads to the Lucky Chance Mountain mining areas. Access into the interior is by foot or helicopter.

(2) History: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Goldschmidt and Haas (1946) identified considerable historic use in this area. Identified sites included two former villages, a former camp, and two forts. Activities pursued in the area included hunting or trapping, salmon fishing, trolling for halibut or king salmon, and shellfishing.

Use of the area by Russian settlers began before 1800, and the Russian settlement, Ozerskoi Redoubt, was well established by 1818. Ozerskoi Redoubt was established to supply New Archangel (Sitka) with fish. The Russians constructed fish weirs and traps to obtain salmon returning to Lake Redutsky (Redoubt Lake). By 1842, the Ozerskoi Redoubt saltery had increased its production and was able to supply fish to other Russian American Company settlements as well. In addition to the saltery, by 1832 Ozerskoi Redoubt included two mills for grinding flour with storage facilities, a tannery, and a stockade. These activities were mostly located on non-National Forest System lands outside the roadless area and more associated with Goddard.

In addition to evidence of use by the Russian settlers, fisheries production and research, and other occupancies have occurred throughout the area. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found. Timber harvest has occurred at the east end of Redoubt Lake, north of Salmon Lake, at the end of Deep Inlet, and at the mouth of a drainage feeding into Aleutkin Bay.

(3) Geography and Topography: The area is generally characterized by fingers of irregular, rugged mountains 2,000 to 4,400 feet in elevation with steep slopes. The area is deeply indented by Redoubt Lake and Deep Inlet. Numerous rocky crests and sharp ridges are found at higher elevations. Snow can be seen all year round on higher summits with a few cirque glaciers and small permanent ice fields in the eastern corner of the area. The shoreline is characterized by forested lowlands with a relatively gentle slope. Forested islands, rocky islands, and reefs dominate the coast along the north and west sides of the area.

Streams are generally short and flow directly to saltwater. One exception is the stream that empties into Redoubt Lake. Cascades are common and the area contains three named lakes (Irina, Redoubt, and Salmon). The largest lake and most dominant feature of the area is Redoubt Lake. Situated in the center of the area, 3,200-acre Redoubt Lake stretches approximately 9 miles and lies at an elevation of about 10 feet above sea level.

There are 290 miles of shoreline along saltwater. Approximately 11 percent of the area consists of alpine tundra, ice, snow, and rock. This includes 214 acres of alpine tundra, 386 acres of ice and snow, and 7,913 acres of rock. The area also includes 5,611 acres of islands located along the coastline, of which, 21 islands are larger than 50 acres. This area has 336 acres of freshwater lakes in addition to Redoubt Lake.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the West Baranof Island Biogeographic Province. Topographically, Baranof Island is the most rugged of all the islands in Southeast Alaska. The southern half of this province is highly dissected by steep-sided fiords. The outer coast is dotted with hundreds of small islands. All forest plant associations except those in the Western red-cedar series and those found around large mainland rivers occur in this province.

Ecological Section/Subsection. The Redoubt Roadless Area is contained entirely within the Baranof-Chichagof Fjordlands Ecological Section (M247B). This area is represented by four ecological subsections (see table below). The Necker Bay Granitics Ecological Subsection (41% of the roadless area) is characterized by exposed rugged granite peaks with shallow unstable soils. Intense glacial scouring has created topographic features including long deep fjords, large lake basins, and hanging valleys. Due to shallow unstable soils, more than half of this area is alpine, rock, brush, or landslide, and forests can only grow at lower elevation. The Sitka Sound Complex Ecological Subsection (34% of the roadless area) is relatively low in elevation and there are no glaciers, although there are some permanent snowfields. Mixed conifer and hemlock-spruce forests dominate the lower elevations and shorelines, and forested wetlands of lodgepole pine and mixed conifer are abundant. The Outer Coast Wave-cut Terraces Ecological Subsection includes thousands of islands that line the western edge of Chichagof and Baranof Islands. Soils in this area are derived from bedrock, and vegetation is varied with grasses along the coastline and stunted Sitka spruce on the interior. Wetlands and lakes are common beyond the beachfront forests. The Central Baranof Metasediments Ecological Subsection has the tallest peaks, roughest terrain, and greatest extension of glaciers, icefields, and snowfields of all islands in Southeast Alaska (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Baranof-Chichagof Fjordlands	Necker Bay Granitics	41%
	Sitka Sound Complex	34%
	Outer Coast Wave-cut Terraces	18%
	Central Baranof Metasediments	7%

(b) Soils: Shallow mineral soils with good drainage can be found on steeper slopes due to rapid loss of material by erosion and efficient rainwater runoff. Deep, well-drained soils commonly occur below the shallow soils on the gentler slopes where transported soil materials have collected. Poorly drained soils are found associated with low, relief and impermeable subsurface layers. Deep organic soils (muskegs) tend to form in locations with poor drainage. In riparian areas, soil zones tend to contain sand and gravels as a result of flood deposition.

(c) Vegetation: The proximity of this area to the open North Pacific Ocean and the unimpeded movement of storms into the area from the southwest results in a low freezing level and high snowfall total. As a result, tree line is at a low elevation and much of the vegetation of the steep watershed basins is alpine tundra. Conifer cover density varies widely even on low slopes near saltwater and is usually interspersed with muskeg and other lower forms of vegetation. Larger intertidal grass and associated meadows species are infrequent. The effects of wind and salt spray affect the character and, to some extent, the species on the west side of this unit.

The vegetation of this roadless area consists primarily of typical spruce-hemlock forests. Western hemlock-Sitka spruce dominate the overstory while the understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Muskegs are abundant within this area, however due to their small size and association with forested sites, accurate acreage estimates are difficult and only 135 acres are mapped. These areas, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low elevation timber stands where drainage is restricted. Trees within the muskegs are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar.

At elevations generally above 2,000 feet, the plant communities (mapped as approximately 214 acres) are characterized by low shrubs, grasses, and sedges. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 58,218 acres mapped as forestland, of which 32,788 acres or 56 percent are mapped as productive old-growth forest. Of the productive old growth, 8,133 acres or 25 percent are mapped as high-volume old-growth forest. The productive old growth includes about 915 acres of high-volume, coarse-canopy old growth. The area also includes 336 acres of second growth where beach harvest has occurred in the past.

(d) Fish Resources: The lakes and streams in this area support runs of coho, pink, chum, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char. The Anadromous Waters Catalogue indicates that the major fish producers in the area are Salmon Creek and Lake, Redoubt Lake, and Kizhuchia Creek (ADF&G, 2000). Redoubt Lake is the major sockeye subsistence fishery for the nearby community of Sitka. Salmon Lake also produces sockeye taken for subsistence. Both lakes also produce substantial numbers of other salmon, trout and Dolly Varden char, and support targeted sport fisheries.

(e) Wildlife Resources: There are many varied wildlife resources in this roadless area. Generally, the area provides good habitat for Sitka black-tailed deer and brown bear. Furbearers such as mink, marten and river otter are also present on Baranof Island. Mountain goats inhabit Baranof Island, and may occur around Lake Diana in this roadless area. Moose, wolves, and black bear are not present on Baranof Island (MacDonald and Cook, 1999). Birds and waterfowl rearing and nesting areas are abundant in this area. Bald eagle habitat, including nesting and roosting trees, can be found along the shorelines.

(5) Management Direction and Current Uses: This roadless area was allocated to three different Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These three LUDs are Modified Landscape, Old-growth Habitat, and Semi-Remote Recreation.

LUD	Acres
Modified Landscape	11,910
Old-growth Habitat	35,663
Semi-Remote Recreation	26,997

Approximately 16 percent of the roadless area was allocated to a development LUD that allows timber harvest and associated road construction (Modified Landscape). The Modified Landscape LUD is located throughout the center of the roadless area, north of Redoubt Lake.

Approximately 84 percent of this area was allocated to non-development LUDs (Old-growth Habitat, Semi-Remote Recreation). The Old-Growth LUD was assigned to approximately 48 percent of the roadless area. Approximately 36 percent of the roadless area was allocated to the Semi-Remote Recreation LUD. The Semi-Remote Recreation LUD is also located on the islands in the area.

There are a number of authorized special uses within the area. One use is an interagency agreement with the Alaska Department of Fish and Game (ADF&G) for fisheries management facilities at Salmon and Redoubt Lakes. A second use is a special use permit with the Northern Southeast Regional Aquaculture Association (NSRAA) for fish net pens in Deep Inlet. The Sitka Tribe of Alaska, NSRAA, ADF&G and the USDA Forest Service (Forest Service) just began an in-depth cooperative project to assess the Salmon Lake fisheries resources and harvest. The Forest Service has been working with various partners, including ADF&G and NSRAA, since the early 1980s to restore Redoubt Lake's sockeye salmon escapement to historical levels of over 50,000 adults annually. This has included operating an adult salmon weir, lake enrichment through fertilization, and limnological sampling to determine the enrichment effectiveness.

Recreational use of the area primarily consists of hunting, fishing, and enjoying the scenery. Use is scattered across the area, with the usual concentrations near lakes, streams, and shorelines. There are five public recreation cabins in the area: Seven Fathom Bay, Kanga Bay, Samsing Cove, Redoubt Lake, and Salmon Lake. There is one National Forest System Trail within the area, the Salmon Lake-Redoubt Lake Trail, as well as a couple of non-system trails that branch off the Salmon Lake-Redoubt Lake Trail and lead up Salmon Creek. The South Baranof Wilderness Area lies directly to the south of this roadless area. Subsistence use occurs in the area.

(6) Appearance (Apparent Naturalness): The area is unmodified except for the evidence of current and historic use of the area. Older beach (and lakeside) logging has occurred at the east end of Redoubt Lake, north of Salmon Lake, at the end of Deep Inlet, and at the mouth of a drainage feeding into Aleutkin Bay. This evidence of use, although locally noticeable, has a very low overall effect on the natural integrity of the area. Both the relative size of the developments and their shoreline location contribute to this low impact. Two areas of timber related developments extend along drainages into the area. The visual effects of these developments, located along Kizhuchia Creek and Camp Coogan Bay, are relatively localized as a result of the topographic screening provided by surrounding mountains.

(7) Surroundings (External Influences): The area is bordered by saltwater and the community of Goddard to the west. External influences from that side are primarily limited to the sights and sounds of motorized boats. The southern boundary adjoins the South Baranof Wilderness which could be considered a positive influence. The Sitka Urban Roadless Area borders the area to the northeast. Two areas of timber harvest and associated road systems extend along Kizhuchia Creek and Camp Coogan Bay into the area. The effects of these developments, located along Kizhuchia Creek and Camp Coogan Bay, are relatively localized as a result of the topographic screening provided by surrounding mountains.

Development on the non-National Forest System lands located immediately north is visible from some locations within the area. Non-National Forest System lands are located along the north shore of Silver Bay and around Green Lake. The Sitka Pulp Mill was formerly located on Silver Bay. Many of the mill structures have been removed and the city of Sitka is planning to reuse the site for industrial purposes. Activities on this site are visible from some locations in the area but are mainly screened by topography. The proximity of the city of Sitka also affects portions of this Roadless Area because of the visibility of the community itself, the relatively heavy use along the coast, and the jet noise from Sitka Airport.

(8) Attractions and Features of Special Interest: Redoubt Lake is the feature of greatest special interest in the Redoubt Roadless Area. This nine-mile-long lake, which sits at an elevation of 9 feet above sea level, was served in the past by a boat tramway that lifted and moved small boats the short distance from Redoubt Bay to the lake. The dilapidated tram was removed in the early 1990s for safety reasons. It has not been replaced. In addition, the natural features of the area, the scenery, and the opportunity to see wildlife are considered attractions. High quality fishing opportunities in the streams and lakes also provide attractions. There are five public recreation cabins in the area: Seven Fathom Bay, Kanga Bay, Samsing Cove, Redoubt Lake, and Salmon Lake. There is one

Forest System Trail within the area, the Salmon Lake-Redoubt Lake Trail, as well as a couple of non-system trails that lead up Salmon Creek. The South Baranof Wilderness Area lies directly to the south of this roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The area's boundaries did not change significantly between 1989 and 2003.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified except for evidence of current and historic use of the area, such as the small area of historic mining activity near Lucky Chance Mountain. Older beach (or lakeside) logging has occurred at the east end of Redoubt Lake, north of Salmon Lake, at the end of Deep Inlet, and at the mouth of a drainage feeding into Aleutkin Bay. This evidence although locally noticeable, has a very low overall effect on the natural integrity of the area. Both the relative size of the developments and their shoreline location contribute to this low impact. Two areas of timber developments extend along drainages into the area. The effects of these developments, located along Kizhuchia Creek and Camp Coogan Bay, are relatively localized as a result of the topographic screening provided by surrounding mountains. Overall, the area's natural integrity and apparent naturalness is high and is suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a high to very high opportunity for solitude and primitive recreation within the area. Both the size of the area and the screening offered by the topography and the vegetation provide some opportunities for solitude and primitive recreation. Recreational use of the area is relatively limited and dispersed, so encounters with other visitors are unlikely. Exceptions to this include Redoubt Lake and the areas around the five public recreation cabins.

The sight or sound of airplanes overhead and boats along the coastlines can also intrude on a visitor's solitude. The proximity of the city of Sitka decreases the opportunity for solitude in portions of the Roadless Area because of the visibility of the community itself, the relatively heavy use along the coast, and the jet noise from Sitka Airport.

The area provides a moderate opportunity for primitive recreation as a result of its size, topographic and vegetative screening, diversity of opportunities, and physical challenges. This area has a highly irregular topography and diverse vegetation that combine to offer a setting capable of providing a variety of primitive recreation opportunities. There are lakes, ponds, streams, bays, rugged mountains, and a varied coastline that contribute to these opportunities. The absence of developed recreational facilities in certain areas further enhances the opportunity for primitive recreation.

Outfitter/guide use was reported at 13 locations in and around this area in 1999. Twenty-nine groups with a total of 230 clients were reported visiting this area. Reported uses included fishing, sightseeing, camping, picnicking, and brown bear hunting. Redoubt Lake Cabin and the Taigud Islands were the most popular locations accounting for 55 and 48 clients, respectively.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	14,966	20%
Semi-Primitive Non-Motorized (SPNM)	40,767	55%
Semi-Primitive Motorized (SPM)	6,946	9%
Roaded Natural (RN)	10,141	14%
Roaded Modified (RM)	1,376	2%

The area contains 23 inventoried recreation places, which cover 22,844 acres, or 31 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	0	0
SPNM	7	11,271
SPM	5	4,584
RN	10	6,593
RM	2	397

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are five public recreation cabins in the area: Seven Fathom Bay, Kanga Bay, Samsing Cove, Redoubt Lake, and Salmon Lake. There is one National Forest System Trail within the area, the Salmon Lake-Redoubt Lake Trail, as well as a couple of non-system trails that branch off the Salmon Lake-Redoubt Lake Trail and lead up Salmon Creek.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Redoubt Roadless Area was 17 out of 28 possible points. A portion of the area was also rated separately and received a score of 19. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 21. The area was rated higher to reflect opportunities associated with adjacent roadless areas and the wilderness to the south.

(4) Ecologic and Geologic Values: The Redoubt Roadless Area is part of a larger contiguous roadless land area that stretches from the north tip of Baranof Island to the South Baranof Wilderness, and from Baranof Warm Springs to Sitka and Biorka Island. The three roadless areas that comprise this roadless land area are North Baranof (#330), Sitka Urban (#331), and Redoubt (#333).

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment identified Sugarloaf Mountain (319), Redoubt Bay (321), and Salmon Lake (323) as primary sportfish producers. The area was not identified as being a primary salmon producer (ADF&G, 1998).

The lakes and streams in this area support runs of coho, pink, chum, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char. The Anadromous Waters Catalogue indicates that the major fish producers in the area are Salmon Creek and Lake, Redoubt Lake, and Kizhuchia Creek (ADF&G, 2000). Redoubt Lake and the inlet stream support Dolly Varden char, and sockeye, pink, chum, and coho salmon. Kizhuchia and Salmon Creeks have estimated annual peak escapements of 3,200 and 6,000 pink salmon, respectively (ADF&G, 2000). Two fishpasses were constructed on Kizhuchia Creek; one in 1980 and the other in 1981. (See additional information on the work at Redoubt Lake and Salmon Lake in earlier sections.) The fisheries restoration work at Redoubt Lake has increased the average annual sockeye salmon escapement from around 10,000 adult sockeye (pre-enrichment) to more than 30,000 adult sockeye (post-enrichment) with returns of over 60,000 adult sockeye in both 1998 and 1999. However, the 2000 and 2001 sockeye escapements were only about 3,000 adult sockeye, requiring emergency closures of both the sport and subsistence fisheries. The 2000 to 2001 returns are partly the result of juvenile fish reared in the lake during 2 years in the mid-1990s when enrichment was not done.

(b) Wildlife Resources: There are many varied wildlife resources in this roadless area. Generally, the area provides good habitat for Sitka black-tailed deer and brown bear. Furbearers such as mink, marten and river otter are also present on Baranof Island. Mountain goats inhabit Baranof Island. Moose, wolves, and black bear are not present on Baranof Island (MacDonald and Cook, 1999). Birds and waterfowl rearing and nesting areas are abundant in this area. Bald eagle habitat, including nesting and roosting trees, can be found along the shorelines of this roadless area.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, 12 sensitive plant species are known or suspected to occur in the Sitka Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are a few cirque glaciers and small permanent ice fields in the eastern corner of the area. Redoubt Lake is one of a few large meromictic lakes on the Tongass National Forest. Redoubt Lake is discussed in the following section, as well as Section III(10).

(5) Scientific and Educational Values: Redoubt Lake is the major feature of ecologic and scientific significance in this area. Meromictic lakes are characterized by a stable bottom layer that does not mix or "turn over" during the fall when cooling surface waters sink. This sinking action or annual flushing is important in aquatic ecosystems because it brings nutrients back up from the depths into the upper layers where they are available for use by photosynthetic organisms. Redoubt Lake's meromictic character results from the presence of a marine saltwater layer at the bottom of the lake. The surface of Redoubt Lake is only slightly above sea level and the lake is only separated from Redoubt Bay by a bedrock sill at the outlet. High tidal or storm surges push saltwater over the sill. Saltwater is denser than the freshwater of the lake and settles to the bottom no matter what the temperature.

There are no Research Natural Areas located in this area. The area is adjacent to the city of Sitka and, therefore, readily accessible to school-age children.

(6) Scenic Values: The visual character type of this roadless area is classified as Baranof Highland. Terrain in this character type consists of an irregular, rugged asymmetrical chain of landforms 2,000 to 4,400 feet in elevation with a steep eastern slope. The gentler western slope is deeply indented with fjords. Generally, landforms are visually massive, bulky and stark throughout the character type. Shoreline forms are very rugged with steep-sided fjord country on both east and west coasts. Rugged headwalls, cliffs and escarpments are common on the west side of this character type, as a result of exposure to the sea wind and waves. Rock faces are sometimes visible on steep-sided fjords near saltwater throughout the unit. Numerous rocky crests, sharp ridges, horns, aretes and cirques are found at higher elevations. Snow can be seen all year round on the higher summits with cirque glaciers and small permanent ice fields, especially in the western portion of the area.

The Redoubt Roadless Area on the west coast of Baranof Island presents a good representation of the Baranof Highland visual character type. This area displays a coastline deeply indented by fjords, and bays, and especially Redoubt Lake and Deep Inlet. It is further characterized by the hundreds of extremely irregular and exposed islands and rocks off the western coast of the area. These islands and rocks provide an opportunity for very dynamic surf waterforms.

The vast majority of the area is considered unmodified except for those areas primarily located near the shoreline with evidence of current or historic use. Evidence of historic use includes old fish production facilities, mineral prospecting, settlements, woodcutting, old cabins, and other historic occupancies. Timber harvest has occurred at the east end of Redoubt Lake, north of Salmon Lake, at the end of Deep Inlet, and at the mouth of a drainage feeding into Aleutkin Bay. Current use includes fish enhancement activities and facilities, fisheries research activities and facilities, various short-term occupancies, and other evidence of the use of the area and the surrounding waters. This

evidence although locally significant, has a very low overall effect on the scenic value of the area. Both the relative size of the developments and their shoreline location contribute to this low impact. Two areas of timber related developments extend along drainages into the area. The effects of these developments, located along Kizhuchia Creek and Camp Coogan Bay, are relatively localized as a result of the topographic screening provided by surrounding mountains.

The area displays natural characteristics when viewed from major and minor water travel routes and from inside the area itself. A number of Visual Priority Routes and Use Areas identified by the Forest Plan are within or adjacent to the area. Identified Visual Priority Routes include: Sitka Sound and Eastern Channel (Alaska Marine Highway); Sawmill Creek Road (public use road); and Sitka Sound, Silver Bay, Deep Inlet, Kanga Bay, Biorka Channel, Hot Springs Bay, Redoubt Bay, Eastern Channel, and Camp Coogan Bay (small boat routes). Use Areas include Sitka Sound, Silver Bay, and the Necker Islands to Eastern Channel, including the west coast of Baranof Island (Saltwater Use Areas); Salmon Lake and Redoubt Lake (Dispersed Recreation Sites); Sitka (Community); Seven Fathom Bay, Samsing Cove, Redoubt Lake, and Salmon Lake (Public Recreation Cabins); Salmon Lake and Redoubt Lake/Goddard (Hiking Trails); and Three Entrance Bay, Seven Fathom Bay, President Bay, Samsing Cove, Tava Island, Kliuchsuuio Bay, and Symonds Bay (boat anchorages).

Approximately 24 percent of this roadless area is inventoried in Variety Class A (possessing landscape diversity unique for the character type). About 42 percent of the area is inventoried as Visual Variety Class B (possessing landscape characteristics common for the character type). Approximately 28 percent of the acreage is rated as Variety Class C (possessing a low degree of landscape diversity). Approximately 6 percent of the area was not inventoried for Variety Class type.

The majority of this roadless area, approximately 86 percent, has an Existing Visual Condition (EVC) I, where the land appears to be untouched by human activity. About two percent of the area has an EVC IV, where changes in the landscape are easily noticed by the average visitor, and may attract some attention. Approximately 7 percent of the area was assigned to EVC V, where changes in the landscape are obvious to the average person and appear to be major disturbances. Approximately 6 percent of the area was not inventoried for Variety Class type.

(7) Social, Cultural, and Historical Values: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Goldschmidt and Haas (1946) identified considerable historic use in this area. Identified sites included two former villages, a former camp, and two forts. Activities pursued in the area included hunting or trapping, salmon fishing, trolling for halibut or king salmon, and shellfishing.

Use of the area by Russian settlers began before 1800, and the Russian settlement, Ozerskoi Redoubt, was well established by 1818. Ozerskoi Redoubt was established to supply New Archangel (Sitka) with fish. The Russians constructed fish weirs and traps to obtain salmon returning to Lake Redutsky (Redoubt Lake). By 1842, the Ozerskoi Redoubt saltery had increased its production and was able to supply fish to other Russian American Company settlements as well. In addition to the saltery, by 1832 Ozerskoi Redoubt included two mills for grinding flour with storage facilities, a tannery, and a stockade.

In addition to evidence of use by the Russian settlers, fisheries production and research, and other occupancies have occurred throughout the area. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found. Timber harvest has occurred at the east end of Redoubt Lake, north of Salmon Lake, at the end of Deep Inlet, and at the mouth of a drainage feeding into Aleutkin Bay.

Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment indicated that seven of the nine VCUs in this area are subsistence use areas with a high sensitivity to disturbance. However, none of the VCUs in this area were included among the VCUs with highest community use value (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The Redoubt Roadless Area is generally well defined by topographic features. The boundaries are determined by well defined watershed divides, Sitka Sound, and the open Pacific Ocean. The boundaries around the State and private lands at Goddard and the two areas of timber related developments that extend into the area are exceptions to this general pattern. South Baranof Wilderness borders the area to the south.

The feasibility of management of this area as wilderness or in an unroaded condition is good, as there is no significant motorized access or other current nonconforming uses within the area itself. Designating this area wilderness would extend the boundaries of the South Baranof Wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: The varied terrain, diverse vegetation, and attractive scenery of this area provide unlimited recreation potential for dispersed recreation. Additional trails and cabins or shelters are possible.

In 1996, the Alaska Visitors Association (AVA) proposed recreation developments in two parts of this Roadless Area. The AVA proposed the following developments in the area extending from Redoubt Bay to Crawfish: backcountry recreation lodge for 150 persons/day, day-use recreation for 150 persons/day, hut-to-hut kayaking for 50 persons/day, day-use wildlife observatory for 50 persons/day, overnight wildlife observatory for 50 persons/day, leased proprietary camp for 15 persons, heli-hiking/skiing for 30 persons/day, equipment storage facility (3,000 cubic feet), flight-seeing landings for 100 persons/day, day-boat docks for 50 persons/day, and boardwalks, trails and paths. They also proposed a backcountry recreation lodge for 250 persons/day at Camp Coogan.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: Two fishpasses were constructed on Kizhuchia Creek, one in 1980 and the other in 1981. Fisheries assessment and restoration work at Salmon Lake and Redoubt Lake is ongoing. NSRAA operates fish net pens in Deep Inlet.

(4) Wildlife Resources: No wildlife enhancement projects are planned for this roadless area.

(5) Timber Resources: There are 32,788 acres mapped as productive old growth in the roadless area. There are also 336 acres of second growth where beach harvest has occurred in the past. Of these acres, 21,911 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,448 acres or 2 percent of this roadless area are estimated to be suitable for timber production. Approximately 321 of the suitable acres are mapped as high-volume old growth; of these acres, 16 are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area is dependent on higher market values. Designating this area wilderness would not affect potential timber harvest in adjacent areas.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present in the area. There are no known epidemic disease occurrences.

(7) Minerals: This area contains 11,569 acres of land identified as a mineral activity tract having a low potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). This area contains 63,176 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); all of these acres are considered to have low potential for development.

There is one known active claim in the area. The USGS Mineral Resource Data website (2001) shows two thorium prospects in the area.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area. Additional roads will be needed to access timber that is available for harvest under the Forest Plan.

(9) Water Availability and Use: There are a number of authorized special uses and five public recreation cabins that create a demand for water in this roadless area. There are no existing or planned hydroelectric or

domestic water projects in this area. The Green Lake power plant, built by the City of Sitka, is about 3 miles north of the Redoubt Roadless Area boundary.

(10) Areas of Scientific Interest: Redoubt Lake is one of the only large meromictic lakes in the Tongass National Forest and a feature of major ecologic and scientific interest within the Redoubt Roadless Area. Meromictic lakes are characterized by a stable bottom layer that does not mix or "turn over" during the fall when cooling surface waters sink. Redoubt Lake's meromictic character results from the presence of a marine saltwater layer at the bottom of the lake. The surface of Redoubt Lake is only slightly above sea level and the lake is only separated from Redoubt Bay by a bedrock sill at the outlet. High tidal or storm surges push saltwater over the sill. Saltwater is denser than the freshwater of the lake and settles to the bottom no matter what the temperature.

The saltwater/freshwater density-stratified water column represents chemocline. Once in place, the salt layer is generally stable and will not allow mixing. Nutrients contained in dead organisms filtering to the bottom are trapped in bottom sediments and subtracted from the ecosystem. However, freshwater springs seeping through fractures in the bedrock may enter the bottom of the lake and gradually degrade the chemocline by dilution until it is renewed by saltwater intrusion. In some situations meromictic lake systems have been reported to act as effective concentrators of solar energy in the unmixed bottom layer, producing unusually warm temperatures at the bottom. Redoubt Lake offers the opportunity to conduct studies of these physical and ecological phenomena.

(11) Land Use Authorizations: There are a number of authorized special uses within the area. One use is an interagency agreement with the ADF&G for fisheries management facilities at Salmon and Redoubt Lakes. A second use is a special use permit with the NSRAA for fish net pens in Deep Inlet. The Sitka Tribe of Alaska, NSRAA, ADF&G, and the Forest Service just began an in-depth cooperative project to assess the Salmon Lake fisheries resources and harvest. The Forest Service has been working with various partners, including ADF&G and NSRAA, since the early 1980s to restore Redoubt Lake's sockeye salmon escapement to historical levels of over 50,000 adults annually. This has included operating an adult salmon weir, lake enrichment through fertilization, and limnological sampling to determine the enrichment effectiveness.

(12) Land Status: The area consists entirely of National Forest System lands. Encumbered land within the roadless area is located in Elovoi Island and around Kizhuchia Creek. Land owned by the City of Sitka is adjacent to the roadless area at the mouth of Redoubt Lake.

IV. Wilderness Evaluation

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Most use of the area is associated with recreational boating, hunting and fishing, and viewing wildlife and the scenery of the area.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Redoubt Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also proposed that the areas surrounding Redoubt Bay and along the coastline be protected Wild and Scenic Rivers. The areas where timber harvest has occurred along Camp Coogan Bay and Kizhuchia Creek were identified for protection as Restoration Areas.

(c) Public Input During Forest Plan Revisions and Appeals: Parts of this area were specifically addressed in public input received during the Forest Plan revision and appeal. Silver Bay, Deep Inlet, Salmon Lake-Redoubt, and Seven Fathom were included in a list of areas that are strategically important to Sitka for subsistence uses (and most also for recreation) and deserve protection. Parts of the area were also identified as important wildlife areas near Sitka. These areas include the Deep Bay area (important for hunting), Redoubt Bay, and the islands towards the Biorka and Goddard area (important local hunting areas). The Sitka Conservation Society (SCS) requested that five of the seven VCUs that comprise the Redoubt Roadless Area be managed under a Primitive Recreation LUD. They identified these VCUs along with other nearby areas to be "at the heart of Sitka's economy and lifestyle." In 1996, the AVA proposed recreation developments in two parts of this Roadless Area. These were the area extending from Redoubt

Bay to Crawfish and Camp Coogan. The AVA's proposals for these areas are outlined in Section III. (1) of this description. Another commenter requested that four of the VCUs in the Redoubt Roadless Area be managed for timber production. The Sierra Club Juneau Group stated that there should be "no roads, period" in Management Area (MA) C50, which encompasses Redoubt Lake and the south portion of the Redoubt Roadless Area.

Parts of the area were also specifically identified in the Forest Plan appeal filed by the SCS. The SCS identified Redoubt Bay and South Lagoon near Goddard as salt chuck areas, which they define as "intertidal bodies of water, typically separated from saltwater by a narrow rocky pass." They noted that these areas are rare in southeast Alaska and requested that salt chuck areas be assigned special status to protect their biological resources, with no logging allowed. The SCS also requested that the Baranof coastal tidal river system, which likely includes part of the Redoubt Roadless Area, be given Wild and Scenic River designation because it is a rare resource that will be more valuable over time than logging the same area would be. The Forest Plan appeal filed by the Southeast Alaska Conservation Council (SEACC) identified two of the VCUs that comprise the area as part of the Sitka Local Use Area, a "SEACC Special Area," where clearcutting should not be permitted. The appeal filed by the Hoonah Indian Association et al. cautioned that the Sitka area is under subsistence stress with too much hunting planned in relation to deer habitat capability.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area is not within the study area of any recently completed project-level EISs.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 330, 331, 332, and 333 as a contiguous complex of roadless areas that should be considered one roadless area and recommended it for permanent protection as LUD II. SEACC included this area in a contiguous complex of roadless areas consisting of Roadless Areas 330, 331, 332, and 333. They recommended this complex for permanent protection as LUD II. The combined area represents just over 500,000 acres.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence

The Alaska Department of Fish and Game rated the Redoubt roadless area as the fifth highest priority for protection in northern Southeast Alaska (for the Redoubt Lake sockeye). This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

A number of individuals recommended this area for protection.

(2) Nearby Roadless and Wilderness Areas and Uses: The nearest wilderness is the South Baranof Wilderness which borders the area to the south. Two other nearby wildernesses are the Admiralty National Monument Wilderness, which lies east of Chatham Strait, and the West Chichagof-Yakobi Wilderness that lies north of Salisbury Sound.

The Redoubt Roadless Evaluation Area is part of a larger roadless land area that stretches the length of Baranof Island. This area consists of four roadless areas and the South Baranof Wilderness. The four roadless areas that comprise this larger area are North Baranof (#330), Sitka Urban (#331), Redoubt (#333), and Port Alexander (#334).

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	95	165
Sitka (Pop. 8,835)	5	5
Hoonah (Pop. 860)	75	145
Angoon (Pop. 572)	40	85

The nearest stop on the Alaska Marine Highway is Sitka.

(4) Relative Contribution to the National Wilderness Preservation System: The Redoubt Roadless Area is located on the west side of Baranof Island, approximately half way between the north and south ends of the island. The South Baranof Wilderness borders the area to the south. The open Pacific Ocean and Sitka Sound border the area to the west and northwest, respectively. The community of Goddard also borders the area to the west. The Sitka Urban Roadless Area (#331) borders the area to the northeast. This roadless area includes a main section on Baranof Island and a secondary section comprised of numerous offshore islands. These islands range in size from bare rocks that hardly stick out of the ocean at high tide to larger islands, such as Gornoi Island. The Redoubt Roadless Area is generally characterized by fingers of irregular, rugged mountains 2,000 to 4,400 feet in elevation with steep slopes. The area is deeply indented by Redoubt Lake and Deep Inlet. Numerous rocky crests and sharp ridges are found at higher elevations. Snow can be seen all year round on higher summits with a few cirque glaciers and small permanent ice fields in the eastern corner of the area. Forested islands, rocky islands, and reefs dominate the coast along the north and west sides of the area. The largest lake and most dominant feature of the area is Redoubt Lake. Situated in the center of the area, Redoubt Lake stretches approximately 9 miles and lies at an elevation of about 10 feet above sea level.

The Redoubt Roadless Area is mostly unmodified and natural appearing. The area has high natural integrity and apparent naturalness. Opportunity for solitude and primitive recreation is high to very high within the area.

The area has moderate to high scenic quality; approximately 24 percent of the landscape is considered distinctive from a scenery standpoint. There are a few cirque glaciers and small permanent ice fields in the eastern corner of the area. Redoubt Lake is one of a few large meromictic lakes on the Tongass National Forest.

The roadless area includes about 8,133 acres of high-volume, old-growth forest. Of these acres, approximately 915 are mapped as high-volume, coarse-canopy old growth.

The Redoubt Roadless Area is classified as being in the West Baranof Island Biogeographic Province and makes up about 9 percent of the province. It is one of eight inventoried roadless areas found within the province that collectively make up about 62 percent of the province. The majority of the South Baranof Wilderness is also within this province and makes up approximately 29 percent of the province.

The Redoubt Roadless Area lies completely within the Baranof-Chichagof Fjordlands Ecological Section and represents 4 percent of the ecological section. The ecological section is well represented in existing wilderness (28 percent) and other non-development LUDs (35 percent) with an additional 13 percent in LUD II.

The largest ecological subsection in the Redoubt Roadless Area is the Necker Bay Granitics (41 percent). This portion represents 17 percent of this ecological subsection within the Tongass National Forest boundary and is well represented by existing wilderness (83 percent) with an additional 16 percent in other non-development LUDs. The Sitka Sound Complex Ecological Subsection represents 34 percent of this roadless area. This portion represents 13 percent of the entire ecological subsection, which is well represented by non-development LUDs (67 percent), but not in existing wilderness and LUD II. The Outer Coast Wave-cut Terraces Ecological Subsection represents 18 percent of the roadless area. This portion represents 11 percent of the entire ecological subsection, which is well represented by existing wilderness (75 percent) and other non-development LUDs (21 percent). The Central Baranof Metasediments Ecological Subsection represents 7 percent of this roadless area. This portion represents 2 percent of the entire ecological subsection, which has approximately 20 percent existing wilderness and is well represented by other non-development LUDs (64 percent).

The Redoubt Roadless Area was rated 21 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 47th from the highest (along with 5 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the Redoubt Roadless Area in an unroaded condition, but little support for designation as wilderness. Designation of the area would add Congressional protection to 13 percent of the Sitka Sound Complex Ecological Subsection, which does not contain any areas under long-term Congressional protection. Designation would create a wilderness that would enlarge the South Baranof Wilderness, and would include the small cirque glaciers, icefields, and Redoubt Lake. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate.

V. Environmental Consequences

The Sitka Sound Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 84 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 16 percent of the roadless area. The land in the development LUDs includes an estimated 1,448 acres that are suitable for timber production (3 percent of the suitable acres on the Sitka Ranger District). Approximately 16 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 11,569 acres of land identified as a mineral activity tract having a low potential for experiencing mineral exploration and development of locatable minerals. This area contains an estimated 63,176 acres of undiscovered locatable mineral resources; all of these acres are considered to have low potential for development. The relatively high recreation use, research activities at Redoubt Lake, and special use permits would continue. The values associated with the natural settings of the roadless area could be affected by ongoing developments allowed by the Forest Plan. The high scenic and geologic values are protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and recreation use and developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including scenic and geologic values, would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to 13 percent of the Sitka Sound Complex Ecological Subsection, which does not contain any areas under long-term Congressional protection

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed and the potential for development, including recreation, research, special uses, and mineral, could be significantly restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including scenic and geologic values, would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to 13 percent of the Sitka Sound Complex Ecological Subsection, which does not contain any areas under long-term Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 333 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								74,570
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	35,663	35,663	35,663	35,663	35,663		35,663	
Semi-remote Recreation	26,997	26,997	26,997	26,997	26,997		26,997	
Recommended LUD II						74,570		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	11,910	11,910	11,910	11,910	11,910		11,910	
Timber production								
TOTAL	**74,570**	**74,570**	**74,570**	**74,570**	**74,570**	**74,570**	**74,570**	**74,570**
Suitable Timber Lands	1,448	1,448	1,448	1,448	1,448	**0**	1,448	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Port Alexander (334)

ACRES (NFS): 124,021

BIOGEOGRAPHIC PROVINCE: West Baranof Island

ECOLOGICAL SECTION: Baranof-Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 25

I. Overview and Description

(1) Location and Access: The area is located on the southern tip of Baranof Island. The open Pacific Ocean and Chatham Strait border the area to the west and east, respectively. The South Baranof Wilderness borders the area to the north.

The area is accessed in three main ways. The first is by floatplane, with Sitka the most frequent place of origin. The second access is by saltwater on both the west and east side. The third access is from the community of Port Alexander, which is located near the southern tip of the area. Access to the area is generally good. This is due to the numerous bays and fjords that provide sheltered anchorage for boats and the numerous lakes accessible by floatplane. The distance from population centers is the primary restriction on access. The area is located approximately 40 miles south of the city of Sitka, serviced by the Alaska Marine Highway and regular flights.

There is one National Forest System Trail in the area. The Sashin Lake Trail extends 1.7 miles from the head of Little Port Walter to the northeast end of Sashin Lake. A short non-National Forest System Trail leading to Round Lake branches north from the Sashin Lake Trail.

(2) History: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Use of the area since 1900 includes fish canneries, herring reduction plants, whaling stations, and settlements. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found. Goldschmidt and Haas (1946) identified a fort and former smokehouse or cabin near Redfish Bay. They also noted that hunting or trapping, salmon fishing, and trolling for halibut or king salmon occurred along the shores of the area. Port Walton was the last whaling station in Southeast Alaska.

(3) Geography and Topography: The area is generally characterized as an irregular, rugged chain of mountains 2,000 to 3,800 feet in elevation with steep slopes and deeply indented fjords. Numerous rocky crests and sharp ridges are found at higher elevations. Snow can be seen all year round on higher summits with a few cirque glaciers and small permanent ice fields in the northern part of the area.

Streams are generally short and flow directly to saltwater. The one exception is the stream that empties into Big Branch Bay. This stream runs in a southerly direction for over 12 miles. Cascades are common and lakes are plentiful. The largest lake is Deer Lake in the northeast end of the area. This lake stretches approximately 4 miles and lies at an elevation of 386 feet. The west coastline exhibits areas of very dynamic surf waterforms.

The area includes approximately 4,702 acres of freshwater lakes and 256 miles of shoreline along saltwater. Approximately 19 percent of the area consist of alpine tundra, ice, snow, and rock. This includes 12,744 acres of alpine tundra, 553 acres of ice and snow, and 9,664 acres of rock. There are approximately 496 acres of small islands located along the coastline.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the West Baranof Island Biogeographic Province. Topographically, Baranof Island is the most rugged of all the islands in Southeast Alaska. The southern half of this province is highly dissected by steep-sided fjords. The outer coast is dotted with hundreds of small islands. All forest plant associations except those in the Western red-cedar series and those found around large mainland rivers occur in this province.

This general area is possibly the highest rainfall zone in North America. The official Weather Service station at Little Port Walter, on the east side of the Port Alexander Roadless Area, records a long-term average annual precipitation of 224 inches. Total precipitation in the upper elevations of the area is probably significantly higher as a result of orographic uplift (winds forced to rise over mountains).

Ecological Section/Subsection. The Point Alexander Roadless Area is contained entirely within the Baranof-Chichagof Fjordlands Ecological Section (M247B). This area is represented by two ecological subsections (see table below). The South Baranof Sediments Ecological Subsection, which covers the vast majority of the roadless area, is underlain by a graywacke bedrock that has been intensely scoured by alpine glaciers. This ecological subsection is unique in that it receives the highest annual precipitation in Southeast Alaska. This climatic condition coupled with the very steep terrain results in a highly unstable landscape. Alpine, brush, and landslide track characterize more than half of the land cover and forest can only grow at mountain bases or along the shoreline. The Outer Coast Wave-cut Terraces Ecological Subsection, which covers 8 percent of the area, includes thousands of islands that line the western edge of Chichagof and Baranof Islands. Soils in this area are derived from bedrock, and vegetation is varied with grasses along the coastline and stunted Sitka spruce on the interior. Wetlands and lakes are common beyond the beachfront forests (Nowacki et. al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Baranof-Chichagof Fjordlands	South Baranof Sediments	92%
	Outer Coast Wave-cut Terraces	8%

(b) Soils: Shallow mineral soils with good drainage can be found on steeper slopes due to rapid loss of material by erosion and efficient rainwater runoff. Deep, well-drained soils commonly occur below the shallow soils on the gentler slopes where transported soil materials have collected. Poorly drained soils are found associated with low relief and impermeable subsurface layers. Deep organic soils (muskegs) tend to form in locations with poor drainage. In riparian areas, soil zones tend to contain sand and gravels as a result of flood deposition.

(c) Vegetation: The proximity of this area to the open North Pacific Ocean and the unimpeded movement of storms into the area from the southwest results in a low freezing level and high snowfall total. As a result, tree line is at a low elevation and much of the vegetation of the steep watershed basins is alpine tundra. Conifer cover density varies widely even on low slopes near saltwater and is usually interspersed with muskeg and other lower forms of vegetation. Larger intertidal grass and associated meadows species are infrequent. The effects of wind and salt spray affect the character and, to some extent, the species on the west side of this roadless area.

The vegetation of this roadless area consists primarily of typical spruce-hemlock forests. Western hemlock-Sitka spruce dominate the overstory while the understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants.

Muskegs, mapped at approximately 1,108 acres, are abundant within this area, however due to their small size and association with forested sites; accurate acreage estimates are difficult. These areas, dominated by sphagnum mosses, sedges, and shrubs of the heath family, are interspersed among low elevation timber

stands where drainage is restricted. Trees within the muskegs are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar.

At elevations generally above 2,000 feet, the alpine plant communities (mapped as approximately 12,744 acres) are characterized by low shrubs, grasses, and sedges. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 66,234 acres mapped as forestland, of which 30,875 acres or 47 percent are mapped as productive old-growth forest. Of the productive old growth, 9,035 acres or 29 percent are mapped as high-volume old-growth forest. The productive old growth includes about 509 acres of high-volume, coarse-canopy old growth. The area does not contain any second-growth forest.

(d) Fish Resources: Many streams and lakes in this area provide habitat for coho, pink and chum salmon as well as Dolly Varden char. Sashin Creek, Mist Cove, and some other streams also provide habitat for steelhead. The streams below Nakvassin and Tumakof Lakes are inhabited by sockeye, coho, pink, and chum salmon as well as Dolly Varden char. Pink and chum salmon are not found in the lakes or in waters above them. Red Fish Bay has a relatively large sockeye salmon run that supports targeted subsistence and commercial fisheries. The Big Branch Bay system produces some sockeye salmon, in addition to other fish species. Lover's Creek contains productive fisheries, especially for pink salmon. The unnamed inlet stream to Big Branch Bay is rated as highly-valued for commercial and sport fisheries by Alaska Department of Fish and Game (ADF&G) (USDA Forest Service, 1997).

(e) Wildlife Resources: There are many varied wildlife resources in this roadless area. Generally, the area provides good habitat for Sitka black-tailed deer and brown bear. Furbearers such as mink, marten and river otter, are also present on Baranof Island. Mountain goats inhabit Baranof Island, but they have not been reported in this roadless area. Moose, wolves, and black bear are not present on Baranof Island (MacDonald and Cook, 1999). Birds and waterfowl rearing and nesting areas are abundant in this area. Bald eagle habitat, including nesting and roosting trees, can be found along the shorelines.

(5) Management Direction and Current Uses:
This area was allocated to two Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These two LUDs are Remote Recreation and Semi-remote Recreation.

LUD	Acres
Remote Recreation	99,915
Semi-remote Recreation	24,106

All of this roadless area was allocated to non-development LUDs (Remote Recreation, Semi-remote Recreation). Most of the roadless area, 81 percent, was allocated to the Remote Recreation LUD. Semi-remote Recreation was assigned to approximately 19 percent of the roadless area, primarily located in the southeast portion. Small islands associated with the roadless area are also allocated to the Semi-remote Recreation LUD

There are a number of authorized special uses located within this area including:

National Marine Fisheries Service—Interagency Agreement for the Little Port Walter Fisheries Research Field Laboratory, including the Research Station at Little Port Walter and an area within the Little Port Walter-Sashin Lake drainage encompassing approximately 2,400 acres.

Northern Southeast Regional Aquaculture Association (NSRAA)—Special Use Permit for use of facilities at Upper Deer Lake, Deer Lake, Mist Cove, Fawn Creek, Upper Rostilaf Lake, Lower Rostilaf Lake, Rostilaf Beach, Borodino Lake, Cliff Lake, Deep Cove, and Osprey Lake.

Armstrong-Keta, Inc.—Special Use Permit for water transmission lines from Jetty Lake to the north shore of Port Armstrong for fish hatchery operation and power generation.

Port Alexander—Special Use Permit for a water supply system.

Recreational use of the area primarily involves hunting, fishing, and enjoying the scenery. This use is scattered across the area, with the usual concentrations near lakes, streams, and shorelines. Subsistence use occurs in this area.

(6) Appearance (Apparent Naturalness): The Port Alexander Roadless Area is considered unmodified except for the evidence of current or historic use of the area. This evidence although locally noticeable, has a very low overall effect on the natural integrity of the area. Both the relative size of the developments and their location close to the shoreline contribute to this low impact. The area generally appears natural when viewed from nearby water travel routes and boat anchorages and from most locations within the area itself.

(7) Surroundings (External Influences): The east and west sides of the area are bordered by saltwater. Two areas of non-National Forest System lands are located along the east shoreline of this area at Port Alexander and Port Armstrong. External influences on these sides are primarily limited to the sights and sounds of motorized boats, and the settlements and research activities along the east coast, which include the city of Port Alexander and the Fisheries Research Station at Little Port Walter. South Baranof Wilderness borders the area to the north.

(8) Attractions and Features of Special Interest: Features of special interest in the Port Alexander Roadless Area include: the high precipitation in the area and the associated ecological effects; the large number of lakes in the area, some at very low elevations and some at higher elevations; and the extremely carved coastline, which has resulted in a large number of deep fjords and bays.

The area contains 19 inventoried recreation places, which cover 18,103 acres, or 15 percent of the roadless area. The natural features of the area, the scenery, and the opportunity to see wildlife are all considered attractions. High quality fishing opportunities in the streams and lakes are also an attraction. There is one National Forest System Trail in this roadless area, but no public recreation cabins.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The north boundary of this area changed slightly between 1989 and 2032. Antipatr Lake and the small group of surrounding lakes, which were part of the roadless area in 1989, are now part of the South Baranof Wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified except for the evidence of current and historic use of the area. Evidence of historic use includes old fish canneries and herring reduction plants, water diversion structures and pipelines, mineral prospecting, old cabins, and other historic occupancies. Current use includes fish enhancement activities and facilities, fisheries research activities and facilities, various short-term occupancies, and the city of Port Alexander. This evidence of historic and current use although locally noticeable, has a low overall effect on the natural integrity and a very low effect on the apparent naturalness of the area. Both the relative size of the developments and their location close to the shoreline contribute to this low impact. Overall, the area has high natural integrity and very high apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is outstanding opportunity for solitude and primitive recreation within the area, especially when the adjacent roadless lands and general remoteness of the area are factored in. Both the size of the area and the screening offered by the topography increase the opportunity for solitude and primitive recreation. Recreational use of the area is relatively limited and dispersed, so that encounters with other visitors are unlikely. The sight or sound of airplanes overhead and boats along the coastlines can occasionally intrude on a visitor's solitude.

The opportunity for primitive recreation is a result of its size, topographic screening, and physical challenges. This area has a highly irregular topography and diverse vegetation that combine to offer a setting capable of providing a variety of primitive recreation opportunities. There are lakes, ponds, streams, bays, rugged mountains, and a varied coastline that contribute to these opportunities. The absence of developed recreational facilities further enhances the opportunity for primitive recreation. As with all backcountry areas on the Tongass, the opportunity for challenge and risk in this area is high. The climate, the rugged terrain, the isolation and distance from population centers with

medical facilities, the barriers to communication, and the presence of large wild animals all contribute to the need for good preparation and knowledge of backcountry survival skills for anyone using this area. Hypothermia and bear encounters are just two examples of the many risks that must be considered before traveling in the backcountry of southeast Alaska.

Outfitter/guide use was reported at 12 locations in this area in 1999. Eleven of these locations were along the east shoreline of the area. The remaining location was Branch Bay, located on the west coast of the area. Sixty-five groups, with a total of 222 clients, were reported visiting this area in 1999. Reported uses included fishing, hiking, and brown bear hunting. Deep Cove was the most popular location accounting for 26 groups and 139 clients.

The area provides primarily primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	111,269	90%
Semi-Primitive Non-Motorized (SPNM)	9,058	7%
Semi-Primitive Motorized (SPM)	3,356	3%
Rural (R)	3	0%

The area contains 19 inventoried recreation places, which cover 18,103 acres, or 15 percent of the roadless area.

ROS Class	# of Rec. Places	Total Acres
P	14	10,153
SPNM	2	4,792
SPM	3	3,158
R	0	0

There is one National Forest System Trail within the area, the Sashin Lake Trail, and no recreation cabins.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Port Alexander Roadless Area was 22 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 25.

(4) Ecologic and Geologic Values: The Port Alexander Roadless Area occupies the southern tip of Baranof Island. The South Baranof Wilderness borders the area to the north.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment lists only one VCU, Port Walter (337), as a primary salmon producer. The remaining VCUs that comprise this area were identified as secondary producers. This area does not include primary sport fish producing areas (ADF&G, 1998).

Many streams and lakes in this area provide habitat for coho, pink and chum salmon as well as Dolly Varden char. Sashin Creek and Mist Cove also provide habitat for steelhead. The estimated annual peak escapement for Sashin Creek is 64,800 pink salmon. The streams below Nakvassin and Tumakof Lakes are

inhabited by sockeye, coho, pink, and chum salmon as well as Dolly Varden char. Pink and chum salmon are not found in the lakes or in waters above them.

Lover's Creek contains productive fisheries, especially for pink salmon. The unnamed inlet stream to Big Branch Bay is rated as highly-valued for commercial and sport fisheries by ADF&G (USDA Forest Service, 1997).

NSRAA has had a Special Use Permit for use of facilities at Upper Deer Lake, Deer Lake, Mist Cove and other nearby areas for many years as part of their barren coho lake rearing project. Juvenile coho have been stocked into many barren lakes in the area (upstream of natural barrier falls) and then either piped or allowed to migrate out over the falls to saltwater with various ranges of mortality depending on the falls and stream flow levels. For about the past 10 years, NSRAA has primarily centralized their remote lake coho stocking and rearing work in this area at Deer Lake. They have added fertilizer to the lake in recent years to boost production capability. This project is one of the most successful coho salmon enhancement projects in southeast Alaska, annually producing over 100,000 adult coho salmon in recent years.

(b) Wildlife Resources: There are many varied wildlife resources in this roadless area. Generally, the area provides good habitat for Sitka black-tailed deer and brown bear. Based on harvest data compiled from 1985 to 1995, VCUs 337, 338, and 339 were ranked in the third 25 percent of brown bear harvest areas on the Tongass (ADF&G, 1998). Furbearers such as mink, marten and river otter are also present on Baranof Island. Mountain goats inhabit Baranof Island, but they have not been reported in this roadless area. Moose, wolves, and black bear are not present on Baranof Island (MacDonald and Cook, 1999). The unnamed inlet stream to Big Branch Bay provides important habitat for Sitka black-tailed deer and brown bear.

Birds and waterfowl rearing and nesting areas are abundant in this area. Bald eagle habitat, including nesting and roosting trees, can be found along the shorelines.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks, are closely associated with productive old growth. In addition, 12 sensitive plant species are known or suspected to occur in the Sitka Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are a few cirque glaciers and small permanent ice fields in the northern part of the area. There are no other unique geologic features known in this area.

(5) Scientific and Educational Values: One feature of ecological and scientific significance is the exceptionally high precipitation and the effect that has on the ecology of the area. The Lover's Creek area has been inventoried as a potential Research Natural Area (RNA) but was not designated in the 1997 Forest Plan. This area, located in possibly the highest rainfall zone in North America, was identified in order to represent several phenomena associated with exceptionally high precipitation. This area contains productive fisheries, and alpine, rock, and snow communities that occupy unusually low elevations. The proximity of the area to the open North Pacific and the unimpeded movement of storms into the area from the southwest probably result in a low freezing level and high snowfall total. As a result, tree line occupies a low elevation and much of the vegetation of the steep watershed basin is alpine tundra. The inventoried area is also of interest because of the presence of Sitka spruce-western hemlock and yellow- cedar forest types that have developed under high rainfall conditions.

The area is located approximately 50 miles south of Sitka and is, therefore, not readily accessible to school-age children, with the exception of those residing in close proximity.

(6) Scenic Values: The visual character type of this roadless area is classified as Baranof Highland. Terrain in this character type consists of an irregular, rugged asymmetrical chain of landforms reaching 3,000-5,300 feet in elevation with a steep eastern slope and a gentler western slope deeply indented with fjords. Generally, landforms are visually massive, bulky and stark throughout the character type. Shoreline forms are very rugged with steep-sided fjord country on both east and west coasts. Rugged headwalls, cliffs, and escarpments are common on the west side of the Baranof Highland character type, as a result of exposure to the sea wind and waves. Rock faces are sometimes visible on steep-sided fjords near saltwater throughout the unit. Numerous rocky crests, sharp ridges, horns, aretes and cirques are found at higher elevations. Snow can be seen all year round on the higher summits with cirque glaciers and small permanent ice fields, especially in the northern portion of the area.

The Port Alexander Roadless Area at the southern end of Baranof Island presents an extreme representation of the Baranof Highland visual character type. This area displays a coastline deeply and repeatedly scalloped by fjords and bays, the result of the Baranof landmass dipping down beneath the ocean surface. A combination of historic glaciation and erosion from the high level of precipitation has further accentuated the carving of cliff topography. This is apparent near the southern tip of the area where the head of Port Lucy, on the east coast of the area, reaches to within one-half mile of the head of Puffin Bay on the west coast. This occurs in an area where Baranof Island is approximately 10 miles across, measured from the mouth Port Lucy to the mouth of Puffin Bay.

The area is unmodified except for the evidence of current and historic use of the area. Evidence of historic use includes old fish canneries and herring reduction plants, water diversion structures and pipelines, mineral prospecting, old cabins, and other historic occupancies. Current use includes fish enhancement activities and facilities, fisheries research activities and facilities, various short-term occupancies, and the city of Port Alexander. This evidence of historic and current use although locally significant, has a very low overall effect on the natural integrity and scenic quality of the area. Both the relative size of the developments and their location close to the shoreline contribute to this low impact. The area generally appears natural when viewed from nearby water travel routes and boat anchorages and from most locations within the area itself.

A number of Visual Priority Routes and Use Areas identified by the Forest Plan are within or adjacent to the area. Identified Visual Priority Routes include: the west coast of Baranof Island and Chatham Strait (Tour Ship Routes) and Chatham Strait, Port Walter, Port Armstrong, Port Alexander, Puffin Bay, Snipe Bay, and Redfish Bay (Small Boat Routes). Use Areas include Redfish Bay, Port Walter, and Big Port Walter, (Saltwater Use Areas); Port Alexander (Community); Sashin Lake Trail (Hiking Trail); and Ship Cove, Little Port Walter, Puffin Bay, Ten Fathom Anchorage, Redfish Bay, Snipe Bay, Port Armstrong, and Deep Cove (Boat Anchorages).

Approximately 24 percent of the area was inventoried as Variety Class A (possessing landscape diversity unique for the character type). Approximately 67 percent of this roadless area was inventoried as Visual Variety Class B (possessing landscape characteristics common for the character type). Approximately 8 percent was inventoried as Variety Class C (possessing a low degree of landscape diversity). Almost all of land within the roadless area, approximately 99 percent, has an Existing Visual Condition (EVC) I, where the land appears to be untouched by human activity.

(7) Social, Cultural, and Historical Values: This area has a long and varied history of use dating from Tlingit use in prehistoric and historic times to the present use by a variety of Alaska residents and visitors. Use of the area since 1900 includes fish canneries, herring reduction plants, whaling stations, and settlements. Remains of structures and other human cultural activity in varying degrees of deterioration can still be found. Goldschmidt and Haas (1946) identified a fort and former smokehouse or cabin near Redfish Bay. They also noted that hunting or trapping, salmon fishing, and trolling for halibut or king salmon occurred along the west shore of the area. The area is located approximately 50 miles south of the city of Sitka.

Based on harvest data compiled from 1985 to 1995, VCUs 337, 338, and 339 were ranked in the third 25 percent of brown bear harvest areas on the Tongass (ADF&G, 1998).

Subsistence use occurs in this area. The Tongass Fish and Wildlife Resource Assessment indicated that the six VCUs along the east coast of the area (VCUs 334 through 339) are subsistence use areas with a high sensitivity to disturbance. None of the VCUs in this area were included among the VCUs with highest community use value (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The Port Alexander Roadless Area is well defined by topographic features. The boundaries determined by Chatham Strait and the Pacific Ocean are easily described and recognized. Even the northern boundary, which follows the boundary of the South Baranof Wilderness, lies on top of major watershed divides. The only area where the boundary is not defined by topographic features is around non-National Forest System lands at Port Armstrong and Port Alexander.

The feasibility of management of this area as wilderness or in an unroaded condition is good, as there is no significant motorized access. The exceptions to this would be the extensive fish enhancement and fisheries research activities along the eastern edge and in most drainages of the area. These activities, although locally noticeable, have a low overall effect on the area.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: The varied terrain, diverse vegetation, and attractive scenery of this area provide unlimited recreation potential for dispersed recreation. Additional trails and cabins or shelters are possible. In 1996, the Alaska Visitors Association (AVA) proposed the following developments for Mist Cove: a trail to Deer Lake, day-use recreation for 100 persons/day, hut-to-hut hiking for 25 persons/day, flight-seeing landings for 50 persons/day, day-boat docks for 20 persons/day, and boardwalks, paths and trails.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: Fisheries research and management activities are ongoing as previously described. The barrier falls at Big Branch Bay was considered a potential fish passage project in the past. It was visited by two fish biologists in the early 1990s while fish were in the stream. The falls are only a partial barrier, with coho and sockeye salmon and Dolly Varden char in abundant numbers upstream of the falls. Work to provide passage around the falls for other fish species is not considered feasible or cost effective.

(4) Wildlife Resources: No wildlife enhancement projects are planned for this roadless area.

(5) Timber Resources: There are 30,875 acres mapped as productive old growth and no acres are mapped as second growth due to harvest in the roadless area. Of these acres, 13,259 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (Remote and Semi-remote Recreation), these forested lands are classified as unsuitable for timber production. Designating this area wilderness would not affect timber harvest in adjacent areas.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present in the area. There are no known epidemic disease occurrences.

(7) Minerals: The area generally has little minerals development potential or current mineral claims. The only exception is a historic claim on a Nickel-Copper deposit, located on the north side of Snipe Bay. Prospecting and examination has occurred on and off since it was first staked in 1922. This area contains an estimated 11,639 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); all of these acres are considered to have low potential for development.

The USGS Mineral Resource Data website (2001) indicates that there are four prospects in the area for nickel, copper, or gold. None of this roadless area was assigned to the Minerals LUD in the 1997 Tongass Land and Resource Management Plan.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area.

(9) Water Availability and Use: The numerous facilities authorized in this area under special use permits create a demand for water. Two of these permits are specifically related to water use. Armstrong-Keta, Inc. has a

Special Use Permit for water transmission lines from Jetty Lake to the north shore of Port Armstrong for fish hatchery operation and power generation. Port Alexander has a Special Use Permit for a water supply system.

(10) Areas of Scientific Interest: One feature of ecological and scientific significance is the exceptionally high precipitation and the effect that has on the ecology of the area. There are no known karst or other unique features in this area.

(11) Land Use Authorizations: Major land use authorizations in this area include the following:

National Marine Fisheries Service—Interagency Agreement for the Little Port Walter Fisheries Research Field Laboratory, including the Research Station at Little Port Walter and an area within the Little Port Walter-Sashin Lake drainage encompassing approximately 2,400 acres.

NSRAA—Special Use Permit for use of facilities at Upper Deer Lake, Deer Lake, Mist Cove, Fawn Creek, Upper Rostilaf Lake, Lower Rostilaf Lake, Rostilaf Beach, Borodino Lake, Cliff Lake, Deep Cove, and Osprey Lake.

Armstrong-Keta, Inc.—Special Use Permit for water transmission lines from Jetty Lake to the north shore of Port Armstrong for fish hatchery operation and power generation.

Port Alexander—Special Use Permit for a water supply system.

(12) Land Status: The area consists entirely of National Forest System lands.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Most use of the area is associated with recreational boating, hunting and fishing, and viewing wildlife and the scenery of the area.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Mansfield Peninsula Roadless Area. In 2001, HR 2908 identified most of the area as a proposed wilderness addition. The remaining portion of the area extending from Cape Ommaney to just north of Port Lucy was identified as a proposed LUD II addition.

(c) Public Input During Forest Plan Revisions and Appeals: This area was specifically addressed in public input received during the Forest Plan revision and appeal. Commenters requested that the area be designated wilderness because of its exceptional beauty, good bear habitat, and rugged terrain. Another commenter requested that the area be assigned to the timber production LUD. The AVA proposed the following developments for Mist Cove: a trail to Deer Lake, day use recreation for 100 persons/day, hut-to-hut hiking for 25 persons/day, flight-seeing landings for 50 persons/day, day boat docks for 20 persons/day, and boardwalks, paths and trails. This area was not specifically identified in any of the Forest Plan appeals.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area is not within the study area of any recently completed project-level EISs.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Department of Fish and Game rated the Port Alexander roadless area as the sixth highest priority for protection in northern

Southeast Alaska. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Area 328 as adjacent to the South Baranof Wilderness and recommended it for permanent protection in a combination of wilderness and LUD II, as described in Alternative 6. SEACC also recommended this area for permanent protection through a combination of wilderness and LUD II as outlined in Alternative 6.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence. A number of individuals recommended this area for permanent protection as wilderness.

(2) Nearby Roadless and Wilderness Areas and Uses: The nearest wilderness is the South Baranof Wilderness, which borders the roadless area to the north. The Tebenkof Bay and Kuiu Wildernesses are located directly east across Chatham Strait from the area.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	120	200
Sitka (Pop. 8,835)	40	55
Hoonah (Pop. 860	110	190
Angoon (Pop. 572)	55	70

The nearest stop on the Alaska Marine Highway is Sitka.

(4) Relative Contribution to the National Wilderness Preservation System: The Port Alexander Roadless Area is located on the southern tip of Baranof Island. The open Pacific Ocean and Chatham Strait border the area to the west and east, respectively. The South Baranof Wilderness borders the area to the north. The area is generally characterized as an irregular, rugged chain of mountains 2,000 to 3,800 feet in elevation with steep slopes and deeply indented fjords and bays. Numerous rocky crests and sharp ridges are found at higher elevations. Snow can be seen year round on higher summits with a few cirque glaciers and small permanent ice fields in the northern part of the area. The area also has a large number of lakes.

The area generally appears natural and unmodified except near the fish research, processing and enhancement related facilities, and the community of Port Alexander. The area has high natural integrity and very high apparent naturalness. The opportunities for solitude and primitive recreation are outstanding within the area.

The area has high scenic qualities; approximately 24 percent of the landscape is considered distinctive from a scenery standpoint. The small cirque glaciers and icefields, high fishery production, and the Lovers Creek very high precipitation with associated ecological effects are unique features of the roadless area.

The roadless area includes about 9,035 acres of high-volume, old-growth forest. Of these acres, approximately 509 are mapped as high-volume, coarse-canopy old growth.

The Port Alexander Roadless Area is classified as being in the West Baranof Island Biogeographic Province and makes up about 16 percent of the province. It is one of eight inventoried roadless areas found within the province that collectively make up about 62 percent of the province. The majority of the South Baranof Wilderness is also within this province and makes up approximately 29 percent of the province.

The Port Alexander Roadless Area lies completely within the Baranof-Chichagof Fjordlands Ecological Section. The roadless area represents 6 percent of the entire ecological section, which is well represented in existing wilderness (28 percent) and other non-development LUDs (35 percent) with an additional 13 percent in LUD II.

The majority of this roadless area is represented by the South Baranof Sediments Ecological Subsection (92 percent). This portion of the roadless area represents 68 percent of the ecological subsection within the Tongass National Forest boundary and is well represented by existing wilderness and non-development LUDs (32 and 68 percent, respectively). The remaining 8 percent of the roadless area is represented by the Outer Coast Wave-Cut Terraces Ecological Subsection. This portion of the roadless area represents 8 percent of the entire ecological subsection, which is well represented by existing wilderness (75 percent) and non-development LUDs (21 percent).

The Port Alexander Roadless Area was rated 25 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its rating is ranked 12th from the highest (along with 12 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is high local and national support for designating the Port Alexander Roadless Area as wilderness. Designation would create a larger wilderness in conjunction with the South Baranof Wilderness. It would include the small cirque glaciers and icefields, and the Lovers Creek high precipitation area. Additionally, it would include areas where ongoing fisheries research and enhancement activities and facilities occur. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be high.

V. Environmental Consequences

The Port Alexander Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 is implemented. All of the roadless area would be managed under non-development LUDs. This area contains 11,639 acres of undiscovered locatable mineral resources; all of these acres are considered to have low potential for development. The relatively high recreation use, research activities, and special use permits would continue. The values, including the historic, scenic, ecologic, high fish production, and geologic values, associated with the natural settings of the roadless area are protected by the Forest Plan.

Under Alternative 6, 100,621 acres, or about 81 percent of the area, would be converted to Recommended Wilderness LUD and the remainder converted to Recommended LUD II. The potential for development, including recreation, research, special uses, and mineral management, could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the majority of the roadless area, including the historic, scenic, ecologic, high fish production, and geologic values, would be provided long -term protection if designated LUD II and protection if designated wilderness.

Under Alternative 7, a 100,621-acre portion of the Remote Recreation and Semi-remote Recreation LUD would be converted to Recommended Wilderness LUD. The potential for development, including recreation, research, special uses, and mineral management, could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the majority of the roadless area, including the historic, scenic, ecologic, high fish production, and geologic values, would be provided long-term protection if designated wilderness.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. The potential for development, including recreation, research, special uses, and mineral management, could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the historic, scenic, ecologic, high fish production, and geologic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 334 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness						100,621	100,621	124,021
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation	99,915	99,915	99,915	99,915	99,915		22	
Enacted Municipal Watershed								
Old-growth Habitat								
Semi-remote Recreation	24,106	24,106	24,106	24,106	24,106		23,378	
Recommended LUD II						23,400		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production								
TOTAL	**124,021**	**124,021**	**124,021**	**124,021**	**124,021**	**124,021**	**124,021**	**124,021**
Suitable Timber Lands	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Brabazon Addition (338)

ACRES (NFS): 500,597

BIOGEOGRAPHIC PROVINCE: Yakutat/Glacier Bay Upland

ECOLOGICAL SECTION: St. Elias-Fairweather Mountains, Northern Gulf Forelands

2003 WILDERNESS ATTRIBUTE RATING: 27

I. Overview and Description

(1) Location and Access: The Brabazon Addition Roadless Area is located on the mainland, approximately 35 air miles east of Yakutat. It is approximately 150 miles northwest of Juneau. The area adjoins the Russell Fiord Wilderness to the west, the Canadian border to the east, and the Glacier Bay National Park to the southeast. The southwestern boundary is the Yakutat Forelands Roadless Area. Access to the roadless area is by foot from the end of Forest Highway 10 or from Russell Fiord and Nunatak Fiord. Air access is by ski-equipped small plane or helicopter. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: The glaciated state of the entire area indicates there has been little human use. There may have been some passage over the glaciers by native peoples in the past; however, there is no physical evidence to support this. European use has been limited to exploration. Human occupation of the Yakutat Forelands (to the southwest of the Brabazon Range) is believed to have started about 1,000 years ago, with the people coming from the north. Tlingit occupation, from the south, began approximately 300 years ago. European ventures into the area started in the late 18th century, with Russian and English traders. There was little contact with outside groups until about 1874. A continuing European-American presence in the Yakutat area has been maintained since. Current activities in the roadless area are scientific or recreational in nature.

(3) Geography and Topography: The Brabazon Addition is characterized by steep, rugged mountains, interspersed with, or surrounded by, glaciers. The glaciers moderate the terrain by providing large, relatively flat areas. The highest point is approximately 9,310 feet above sea level. The majority of the area is above 3,000 feet; although there are some areas below 1,000 feet. Most surface features are hidden by the glaciers. Major glaciers within the area are the Chamberlain (on the south), Novatak, Yakutat (feeding Harlequin Lake), Hidden (feeding Russell Fiord), East and West Nunatak (feeding Nunatak Fiord), and Battle (extending into Canada). There are several small lakes in the roadless area. The visual character is the Coast Range. This area does not have saltwater shoreline. There are approximately 1,575 acres of freshwater lakes, 120,215 acres of ice and snow, 54,036 acres of rock, and no acres mapped as alpine within this roadless area.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The roadless area is in the Yakutat/Glacier Bay Upland Biogeographic Province. The province includes mountains as high as 10,000 feet, extensive active glaciers, and fiords. The climate is very wet.

Ecological Section/Subsection. The Brabazon Addition Roadless Area is contained almost entirely within the St. Elias-Fairweather Mountains Ecological Section (M244C) with portions within the Northern Gulf Forelands Ecological Subsection (M245B). These areas are represented by two ecological subsections (see table below). The towering mountains of the St. Elias-Fairweather Icefields Ecological Subsection, which covers 99 percent of the roadless area, reach elevations of 19,000 feet. The faulted and folded sedimentary rocks are covered almost completely by icefields, snowfields, and glaciers except for occasional nunataks

and rock cliffs. Rocky and thin soils exist where ice, snow, and active scree fields are not present. Here, alpine communities of sedges, forbs, grasses, and low shrubs thrive (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
St. Elias-Fairweather Mountains	St. Elias-Fairweather Icefields	99%
Northern Gulf Forelands	Yakutat-Lituya Forelands	1%

(b) Soils: There is little soil development because of recent glaciation. The primary feature (other than ice) is sharply uplifted bedrock, with steep, deeply incised slopes. Terrain is mountainous above the ice plains. Glaciers occupy much of this area.

(c) Vegetation: Vegetation is sparse and consists of lichens, mosses and grasses. Tree or brush species are unusual and are concentrated around the fringes, especially to the southeast in the Alsek River drainage. There are no mapped forestlands within the roadless area. There are no acres of mapped muskeg or of alpine vegetation.

(d) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicates that VCUs 353, 354, 888, and 999 are non-producers of salmon. No important fish streams have been identified in the roadless area. There is some fishing activity in the two lakes adjacent to the southeastern boundary.

(e) Wildlife Resources: Little is known about the wildlife in the Brabazon Addition. The area is used by mountain goats, and possibly by black and brown bear. Small mammals, such as pika, are present.

(5) Management Direction and Current Uses: This roadless area was allocated to one Land Use Designation (LUD) under the 1997 Tongass Land and Resource Management Plan. This LUD is Remote Recreation.

LUD	Acres
Remote Recreation	500,597

All of this roadless area was allocated to a non-development LUD, Remote Recreation.

(6) Appearance (Apparent Naturalness): The roadless area is unmodified and the appearance is entirely wild and natural.

(7) Surroundings (External Influences): The surrounding areas are all roadless and unmodified. The area to the west is a designated wilderness area, the areas to the north and south are rugged mountains surrounded by, or containing, glaciers and ice fields, and the area to the southeast is a National Park. The area to the southwest is in the Yakutat Forelands Roadless Management Area (339). Additionally, the nature of the adjoining terrain is such that development of any kind is unlikely to occur. There are commercial flights to the south; however, none occur over the roadless area. There are occasional small aircraft overflights, generally near the southwestern boundary.

(8) Attractions and Features of Special Interest: Attractions in the area include sightseeing (primarily from aircraft), ice climbing, rock climbing, and mountain goat hunting. Several local people ski the area using small planes for access. The rugged mountains springing from massive ice fields provide a spectacular view. Some fishing occurs in two lakes accessible from the Alsek River. The primary scientific interest centers on glacial processes. There are no inventoried recreation places or trails.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries have not changed since 1989.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified. Natural integrity has not been affected.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The opportunity for solitude is outstanding and the opportunity for primitive recreation is very high over the whole of the Brabazon Addition. The area's large size, difficult access, and very low visitor numbers provide this solitude. There is occasional disruption by small aircraft flying overhead.

The difficult terrain and the inaccessibility of the roadless area make crossing the area extremely challenging. As with all backcountry areas on the Tongass, the opportunity for challenge and risk in this area is high. The climate, the rugged terrain, the isolation and distance from population centers with medical facilities, the barriers to communication, and the presence of large wild animals all contribute to the need for good preparation and knowledge of backcountry survival skills for anyone using this area. Hypothermia and wild animal encounters are just two examples of the many risks that must be considered before traveling in the backcountry of southeast Alaska.

The area provides only primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	499,914	100%

There are no inventoried recreation places within this roadless area

ROS Class	# of Rec. Places	Total Acres
P	0	0

There are no developed recreation facilities in the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness; outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Brabazon Addition Roadless Area Roadless Area was 27 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was also given a rating of 27.

(4) Ecologic and Geologic Values: The numerous glaciers in the roadless area, including the Art Lewis, East and West Nunatak, Novatak, Chamberlain and Yakutat Glaciers, are of interest to those studying the development of glaciers and their effect on the ecology of an area.

> **(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicates that all VCUs, primarily VCUs 888, and 999, are non-producers of salmon. No fish-bearing streams have been identified in the roadless area (ADF&G, 2000). There is some fishing activity in the two lakes adjacent to the southeastern boundary.

(b) Wildlife Resources: Little is known about the wildlife in the Brabazon Addition. The only known use by wildlife is by mountain goats, with some possible use by black and brown bears. It may be assumed that some small mammals, such as pika, are present.

(c) Threatened, Endangered, and Sensitive Species: There are no identified threatened, endangered, or sensitive wildlife species known to use the roadless area. In addition, nine sensitive plant species, and two species proposed as sensitive, are known or suspected to occur in the Yakutat Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are numerous glaciers in this area, including the Art Lewis, East and West Nunatak, Novatak, Chamberlain and Yakutat Glaciers. There are no other unique geologic features in this area.

(5) Scientific and Educational Values: The area is typical of much of the mainland coastal mountains. These are rugged, heavily glaciated mountains, with little vegetation. The area is of scientific interest for the effects of glaciation. The Brabazon Addition Roadless Area is not unique within the Coastal Mountain character type. The potential of the Russell Fiord being isolated from saltwater by Hubbard Glacier and becoming Russell Lake has been of considerable scientific interest. The glaciers in the Brabazon Range would be the primary contributors of freshwater to the lake.

(6) Scenic Values: The roadless area is unmodified; the appearance is entirely wild and natural. The remoteness and ruggedness have discouraged modification. The visual character of the area is the Coast Range. The landforms are generally massive, dissected by steep-walled canyons and valleys. Much of the area is glacier covered, making the sharp relief even more evident. This natural landscape can be seen from within the area and when traveling in the surrounding water bodies. No Visual Priority Routes and Use Areas within the area were identified by the Forest Plan. However, the higher mountains and glaciers of the roadless area are visible from many Visual Priority Routes and Use Areas located outside, but near the area.

The roadless area is inventoried as Variety Class A, possessing landscape diversity unique for the character type. It is also in Existing Visual Condition I, having the appearance of being untouched by human activity.

(7) Social, Cultural, and Historical Values: The glaciated state of the roadless area indicates there has been little human use. There may have been some passage over the glaciers by native peoples in the past; however, there is no physical evidence to support this. European use has been limited to exploration. Human occupation of the Yakutat Forelands (to the southwest of the Brabazon Range) is believed to have started about 1,000 years ago, with the people coming from the north. Tlingit occupation, from the south, began approximately 300 years ago. European ventures into the area started in the late 18th century, with Russian and English traders. There was little contact with outside groups until about 1874. A continuing European-American presence in the Yakutat area has been maintained since. Current activities in the roadless area are scientific or recreational in nature. The opportunity for solitude is very high. The area's large size, difficult access, and very low visitor numbers provide this solitude. The area is unmodified. There is occasional disruption by small aircraft flying overhead. The difficult terrain and the inaccessibility of the roadless area make crossing the area extremely challenging. The area contains no recreation places. The area provides primarily primitive recreational. No VCUs are listed among the VCUs with highest community use value or with highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The roadless area lies in a northwest to southeast orientation and is irregularly shaped. Length is approximately 47 miles and the width is approximate 20 miles. The area could be easily managed as a wilderness within the current boundaries. With the exception of the Yakutat Forelands Roadless Area to the southwest, the Brabazon Addition Roadless Area is surrounded by areas where management is highly unlikely to change and the boundaries are described by law. Much of the management activities within the Yakutat Forelands Roadless Area are on the south and western portions; much of that roadless area is also designated LUD II by Congress. The southern boundary of the Brabazon Addition is a "point-to-point" straight line, approximately 14 miles long, and is not tied to physical points.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Cruise ships travel to Glacier Bay National Park. There are daily scheduled commercial flights into Yakutat. There may be opportunities to conduct additional aerial sightseeing trips over the area. Remoteness and rugged terrain limit other opportunities to the primitive recreation. Potential exists for the development of trails and the possible construction of recreation cabins. These facilities probably would receive little use because of accessibility.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence use, if any occurs.

(3) Fish Resource: No fisheries habitat improvement activities are planned or proposed.

(4) Wildlife Resources: No wildlife habitat improvement activities are planned or proposed.

(5) Timber Resources: There are no timber resources and no potential for development of timber resources.

(6) Fire, Insects, and Disease: The area has no fire history. There are no known insect or disease occurrences.

(7) Minerals: The opportunity for mineral development appears low. There are no known deposits of minerals with in the area. The USGS Mineral Resource Data website (2001) indicates that there is one prospect for cobalt in this area. This area contains an estimated 453,689 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); all of these acres are considered to have low potential for development.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area.

(9) Water Availability and Use: There are no public recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The numerous glaciers in the roadless area, including the Art Lewis, East and West Nunatak, Novatak, Chamberlain and Yakutat Glaciers, are of interest to those studying the development of glaciers and their effect on the ecology of an area.

(11) Land Use Authorizations: Several outfitter/guides are permitted tours in the area. However, none have reported use.

(12) Land Status: There are no non-National Forest System lands located within the roadless area, nor any encumbrances or restrictions.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The roadless area receives little use by local residents and little is known about local concerns on how the roadless area should be managed.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. The Brabazon Addition Roadless Area was not one of those areas. In 2001, HR 2908 proposed designating the entire roadless area in a wilderness.

(c) Public Input During Forest Plan Revision and Appeals: There were no specific comments on the roadless area. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated on the Tongass National Forest. Others stated that all unroaded areas should be designated wilderness.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development. Include local comments also

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless area are available.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Department of Fish and Game rated the Brabazon Addition roadless area as the seventh highest priority for protection in northern Southeast Alaska. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

SEACC recommended that the remaining unlogged portions of the Yakutat area, including Roadless Areas 338, 339, and 341, be protected through a combination of LUD II and wilderness designations as in Alternative 6.

The Yakutat Tlingit Tribe supported "…the present land management scheme." and stated that it did not want to see "…changes in the Wilderness designation…."

Some individuals recommended this area for permanent protection because of world-class scenery, abundant wildlife and habitat, and almost unilateral support for wilderness protection.

(2) Nearby Roadless and Wilderness Areas and Uses: The Russell Fiord Wilderness lies to the north and northwest of the Brabazon Addition. The Yakutat Forelands Roadless Area lies along the southwestern boundary. The Glacier Bay National Park and Preserve, which is managed as wilderness, lies to the south. The area to the east, across the Canadian border, is essentially a wild, unmanaged area with no development. Because of the surrounding areas, the Brabazon Addition evaluation area is part of a contiguous unroaded area of several million acres. Roadless National Forest System lands alone total over a million acres in the vicinity of the Brabazon Roadless Area.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles*
Juneau (Pop. 30,711)	150	310
Sitka (Pop. 8,835)	190	325
Cordova (Pop. 2,454)	230	300
Anchorage (Pop. 260,283)	360	670

* No direct water access. The closest water access points are in Russell Fiord (2 miles) and Nunatak Fiord (one and one-half miles).

Yakutat has twice-daily commercial air service, both north- and southbound. There is no ferry service. The nearest Alaska Marine Highway terminals are at Hoonah to the east and Cordova to the west.

(4) Relative Contribution to the National Wilderness Preservation System: The Brabazon Addition Roadless Area is located on the mainland, approximately 35 air miles east of Yakutat. The area adjoins the Russell Fiord Wilderness to the west, the Canadian border to the east, and the Glacier Bay National Park to the southeast. The southwestern boundary is the Yakutat Forelands Roadless Area. The area is characterized by steep, rugged mountains, interspersed with, or surrounded by, glaciers. The glaciers moderate the terrain by providing large,

relatively flat areas. The highest point is approximately 9,310 feet above sea level, at Boundary Peak 176. The majority of the area is above 3,000 feet; although there are some areas below 1,000 feet. Most surface features are hidden by the glaciers. Major glaciers within the area are the Chamberlain (on the south), Novatak, Yakutat (feeding Harlequin Lake), Hidden (feeding Russell Fiord), East and West Nunatak (feeding Nunatak Fiord), and Battle (extending into Canada). There are several small lakes located in the roadless area.

The area is unmodified and has outstanding natural integrity and apparent naturalness. The opportunity for solitude is outstanding and the opportunity for primitive recreation is very high within the area.

The Brabazon Addition Roadless Area has unique scenic quality; all of the landscape is considered distinctive from a scenery standpoint. There are numerous glaciers in this area, including the Art Lewis, East and West Nunatak, Novatak, Chamberlain, and Yakutat Glaciers.

The roadless area is in the Yakutat/Glacier Bay Upland Biogeographic Province and makes up about 55 percent of the province. It is one of three roadless areas that make up about 62 percent of the province. The majority of the Russell Fiord Wilderness is located in the province and accounts for about 37 percent of the province.

The Brabazon Addition Roadless Area lies within two ecological sections; it represents 53 percent of the St. Elias-Fairweather Mountains Ecological Section and 2 percent of the Northern Gulf Forelands Ecological Section. The St. Elias-Fairweather Mountains Ecological Section is well represented by existing wilderness and non-development LUDs (35 and 64 percent, respectively, including 1 percent in LUD II). The Northern Gulf Forelands Ecological Section is well represented by non-development LUDs (72 percent, including 33 percent in LUD II).

Almost all of the Brabazon Addition Roadless Area (99 percent) is contained within the St. Elias-Fairweather Icefields Ecological Subsection. This portion of the roadless area represents 60 percent of the entire ecological subsection, which is well represented by existing wilderness and non-development LUDs (27 and 72 percent, respectively including 1 percent in LUD II). The remaining 1 percent of this roadless area is within the Yakutat-Lituya Forelands. This portion represents 2 percent of the entire ecological subsection, which is well represented by LUD II and other non-development LUDs (33 and 39 percent, respectively) with an additional 9 percent in existing wilderness.

The Brabazon Addition Roadless Area was rated 27 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its rating is ranked 2nd from the highest (along with two other roadless areas) among the 109 Tongass inventoried roadless areas.

There is local support for managing the Brabazon Addition Roadless Area in an unroaded condition and national support for designating the area as wilderness. Designation would create a wilderness that connected the Russell Fiord Wilderness with the Glacier Bay National Park Wilderness, thus creating a very large expanse of wilderness on the mainland and adjacent to Canada. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be very high.

V. Environmental Consequences

The Brabazon Addition Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 is implemented. All of the roadless area would be managed under non-development LUDs. This area contains an estimated 453,689 acres of undiscovered locatable mineral resources. All of these acres are considered to have low potential for development. The relatively low recreation use and special use permits would continue. The values, including the high scenic values, associated with the natural settings of the area are protected by the Forest Plan.

Under Alternatives 6, 7, or 8, the entire roadless area would be converted to Recommended Wilderness LUD. The ongoing recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic values, would be provided long-term protection if designated wilderness. Designation would also provide connection between the Glacier Bay National Park Wilderness and the Russell Fiords Wilderness, all connected to the World Heritage Site that also includes the Wrangell St. Alias National Park and the Kluane and Tatshenshini Parks in Canada.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 338 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness						500,597	500,597	500,597
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation	500,597	500,597	500,597	500,597	500,597			
Enacted Municipal Watershed								
Old-growth Habitat								
Semi-remote Recreation								
Recommended LUD II								
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production								
TOTAL	500,597	500,597	500,597	500,597	500,597	500,597	500,597	500,597
Suitable Timber Lands	0	0	0	0	0	0	0	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Yakutat Forelands (339)

ACRES (NFS): 337,374

BIOGEOGRAPHIC PROVINCE: Yakutat Forelands, Yakutat/Glacier Bay Upland

ECOLOGICAL SECTION: St. Elias-Fairweather Mountains, Northern Gulf Forelands

2003 WILDERNESS ATTRIBUTE RATING: 22

I. Overview and Description

(1) Location and Access: The Yakutat Forelands Roadless Area is located on the mainland, southeast of Yakutat. The area adjoins National Forest System, State and private lands to the northwest, and the Glacier Bay National Park to the southeast. Forest Highway 10, the Russell Fiord Wilderness, and the Brabazon Range bound the Yakutat Forelands on the northeast. The southwestern boundary is the Gulf of Alaska, from Dry Bay to Johnson Slough. The center of the roadless area is approximately 30 air miles from Yakutat and 150 miles from Juneau.

There is small boat access via rivers, but anchorages are virtually non-existent along most of the Gulf Coast. Floatplane access is difficult. Estuary water contains significant amounts of suspended glacial sediment and constantly shifting bars that are undetectable in the muddy water. Plane access is achieved primarily by landing wheeled planes on the beach or on rudimentary airstrips. There are seven maintained strips for wheeled aircraft. Forest Highway 10 goes from Yakutat to the Dangerous River, providing vehicle access to the upper reaches of several rivers, as well as direct access to approximately 40 percent of the northern boundary. All-terrain vehicles (ATV) are used along most of the beaches, to access many of the river bottoms and from the road system to access the uplands. Access away from water and from the airfields is by foot or helicopter. There are four hiking trails in the roadless area.

(2) History: Human settlement in the area is believed to have begun about 1,000 years ago, with the people coming from the north (probably Eyak from the Copper River). Tlingit occupation from the south began approximately 300 years before the present. European ventures into the area started in the late 18th century with Russian and English traders. A Russian farming settlement was established in the approximate location of Yakutat in 1796. Hostilities between the Russians and the Alaska Native population ended when the Yakutat Tlingits removed the settlement in 1805. Little contact between whites and the Tlingits occurred from 1805 to about 1874. Activities since 1874 have included mining, fish canneries, fur farms (mink and fox), manufactured native goods, and tourism. Salmon processing became a major industry, with the first salmon cannery constructed in 1902. Others, located along the Gulf coast, followed over the next 20 or so years. In the early 20th century, a railroad was planned from Yakutat to Dry Bay for the service of the various canneries; however, construction eventually went only to Johnson Slough, with lines serving the Situk and Lost Rivers. There was a large military presence, with attendant activities, during World War II. More recent activities within or adjacent to the roadless area have included commercial logging operations, commercial fishing, and outfitter/guide services for sports fishing and hunting.

(3) Geography and Topography: Approximately 80 percent of the roadless area is relatively flat, with elevations ranging from sea level to approximately 200 feet. The lowland terrain is characteristic of formerly glaciated topography, glacial outwash plains with lateral and terminal moraines, separated by low, flat areas with numerous streams and rivers as well as large marshes and muskegs. The rivers and streams are low gradient and follow wandering and braided channels, with wide floodplains. Due to the flat topography, a major runoff episode may completely change the location of stream courses and may combine two or more totally divergent streams into one system. Were the Hubbard Glacier, located to the northwest, to close off Russell Fiord, the resulting lake could

reach overflow in a short period of time. The Situk River would be the overflow channel, drastically changing the landscape in this area. The northeastern half also contains many lakes; the largest is over 500 acres.

The northeast quadrant contains the southern slopes of the Brabazon Range, with elevations ranging from 200 feet to approximately 4,980 feet. This mountainous area is steep and highly dissected with numerous stream courses. Several glaciers are present, and include the Rodman, Fassett, Canyon, and Martin Glaciers. The beach area is subject to drastic change due to open-water wave activity and ocean storms. The coastal area contains an extended stretch of sand dunes, formed by the wind. This dunes area is one of two found in Alaska. There are approximately 203 miles of shoreline on saltwater and 3,994 acres of small islands with only 9 of the almost 500 islands larger than 50 acres. Freshwater lakes total approximately 3,330 acres. There are 385 acres of alpine tundra, 21,457 acres of ice and snow and 20,287 acres of rock mapped in the area.

(4) Ecosystem:

(a) Classification: Biogeographic Province. Most of the area is in the Yakutat Forelands Biogeographic Province. The province includes Glacier Bay north to Yakutat Bay. The area is very young, with nearly flat landscape and active isostatic rebound (uplifting of the ground after the glaciers have receded. Most surfaces vary from 200 to 1,500 years old. Dune formation and succession are on-going processes, due to glacial rebound and active wave action. The climate is typical of the coastal maritime zone. Total annual precipitation at Yakutat is 135 inches, with a 33-year snowfall average of 219 inches. The remainder of the roadless area (approximately 20 percent) is in the Yakutat/Glacier Bay Upland Biogeographic Province. This province includes the upland area northeast of the Yakutat Forelands Biogeographic Province. The province includes mountains as high as 10,000 feet, extensive active glaciers, and fiords. The climate is very wet.

Ecological Section/Subsection. The Yakutat Forelands Roadless Area is contained within the Northern Gulf Forelands Ecological Section (M245B) and St. Elias-Fairweather Mountains Ecological Section (M244C). These areas are represented by two ecological subsections (see table below). The Yakutat-Lituya Forelands Ecological Subsection (79% of the roadless area) is a vast coastal plain that was formed by the seaward deposition of sediments from the mountains. The soils of the gently sloped area include unconsolidated glacial, alluvial, and marine deposits. The coast is spotted with parabolic dunes formed from outwash sand. The low gradient terrain prevents rapid drainage, and the majority of land cover is wetland. The flat land also allows complex braided stream systems with vast floodplains. Where slight elevations exist, Sitka spruce, hemlock, or cottonwood trees are present. The towering mountains of the St. Elias-Fairweather Icefields Ecological Subsection (21% of the roadless area) reach elevations of 19,000 feet. The faulted and folded sedimentary rocks are covered almost completely by icefields, snowfields, and glaciers except for occasional nunataks and rock cliffs. Rocky and thin soils exist where ice, snow, and active scree fields are not present. Here, alpine communities of sedges, forbs, grasses, and low shrubs thrive (Nowacki et. al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Northern Gulf Forelands	Yakutat-Lituya Forelands	79%
St. Elias-Fairweather Mountains	St. Elias-Fairweather Icefields	21%

(b) Soils: The majority of the soils for the Yakutat Forelands lowlands are youthful soils of glacio-fluvial and fluvial origin. Terrain is generally gently sloping. Base material is highly variable and consists of igneous, metamorphic, and sedimentary rocks. The mountainous northeastern portion of the roadless area consists of steep, deeply incised slopes of exposed bedrock. Glaciers still occupy much of this area. Other features, such as mature soils (unglaciated remnants), steep slopes and dunes occur, but to a limited extent. Recent glaciation and ongoing uplift has, and does, affect soil development. Groundwater over most of the area is at or near the surface. Large portions of the roadless area are poorly drained organic soils.

(c) Vegetation: Much of the vegetation in the lowlands are marsh and muskeg species, with willows, cottonwoods and alders on the drier sites. The wetland species are primarily sphagnum moss, sedges, and heathers. The drier sites contain low-growing species such as devils-club, salmonberry, blueberry, copper bush, hellebore, ferns, skunk cabbage and huckleberry, over a carpet of mosses and liverworts. Timbered areas contain primarily a dense overstory of Sitka spruce and/or western hemlock. Even in heavily timbered areas, the tree species are found on the drier sites on the ridges, separated by marsh or muskeg, containing meandering streams. The climate is very wet. Lichen communities dominate ice-free areas above 2,000 feet elevation. Approximately 385 acres are mapped as alpine vegetation, and 70,884 acres are mapped as muskeg. Muskeg is interspersed within other types in units too small to map. Therefore, the acreage for muskeg may be substantially understated.

The sand dune area along the beach has a plant association, unique to Southeast Alaska. Uncommon plants found here include species of the *Atriplex*, *Lupimachia* and *Saussurea* genera.

There are approximately 164,922 acres mapped as forestland, of which 34,829 acres or 21 percent are mapped as productive old-growth forest. Of the productive old growth, 20,998 acres or 60 percent are mapped as high-volume old-growth forest. The productive old growth includes about 20,030 acres of high-volume, coarse-canopy old growth. There are no acres of second growth forest where timber harvest has occurred in the past.

(d) Fish Resources: There are numerous fish-bearing streams in this area. The Anadromous Waters Catalogue (ADF&G, 2000) identifies Williams Creek, Akwe River, Italio River, Ahrnklin River, and Situk River as primary fish-bearing streams. Additional Class I streams include: Cabin Slough, Emile Creek, Gines Creek, Clear Creek, Tanis River and Lake, Muddy Creek Cannery Creek, Square Creek and Outflow, Ustay River and Triangle Lake, Dangerous River, Miller Creek, Antlen River, Seal Creek, Middle Slough, and Kunayosh Creek. These waters provide habitat for sockeye, chinook, coho, pink, and chum salmon; steelhead and cutthroat trout; and Dolly Varden char. Eulachon run in the Situk, Lost, Dangerous, Italio, Akwe, and Alsek Rivers.

(e) Wildlife Resources: The Yakutat Forelands support a rich wildlife population, both in numbers and species diversity. Large mammal species include both brown and black bears (including the glacier bear, a bluish color phase of the black bear), moose, wolverines, wolves, and mountain goats. There is a Sitka black-tailed deer population, as a result of transplant efforts in the 1940's. Small animals include mink, marten, beaver snowshoe hare and pika, as well as several amphibian species. There are few resident bird species; however, the area is heavily used by migratory species, both for nesting and resting and includes waterfowl and raptors.

(5) Management Direction and Current Uses: This roadless area was allocated to seven Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These seven LUDs include Timber Production, Scenic Viewshed, LUD II, Semi-remote Recreation, Remote Recreation, Old-growth Habitat, and Special Interest Area.

LUD	Acres
Timber Production	13,262
Scenic Viewshed	9,477
LUD II	137,099
Semi-remote Recreation	121,149
Remote Recreation	51,031
Old-growth Habitat	3,248
Special Interest Area	2,067

Approximately 7 percent of the roadless area was allocated to development LUDs, which allow timber harvest and the associated road construction (Timber Production, Scenic Viewshed). The Timber Production LUD was assigned to approximately 4 percent of the roadless area. Near the community of Yakutat and Highway 10, approximately 3 percent of the roadless area was allocated to the Scenic Viewshed LUD.

Most of this roadless area, approximately 93 percent, was allocated to non-development LUDs (LUD II, Semi-remote Recreation, Remote Recreation, Old-growth Habitat, Special Interest Area). Approximately 41 percent of the roadless area was allocated to the LUD II designation, which makes up the Yakutat Forelands LUD II area. The Semi-remote Recreation LUD was assigned to approximately 36 percent of the roadless area. Approximately 15 percent of the roadless area was allocated to the Remote Recreation LUD. Adjacent to the Russell Fiords Wilderness Area, approximately 1 percent of the roadless area was allocated to the Old-growth Habitat LUD. Less than 1 percent of the roadless area was allocated to the Pike Lake Special Interest Area LUD to recognize its unusual muskeg formation in the Yakutat area. It is managed as a recreational Special Interest Area.

There are 10 public recreation cabins, 7 aircraft landing strips, and 4 trails in the roadless area. Timber management and associated developments have taken place on the western and northwestern boundaries. Oil and gas exploration has occurred in the recent past but no development has occurred.

Other uses include sport fishing and hunting, subsistence fishing, hunting and trapping, and commercial fishing. Most of the use comes from local residents, except for sports hunting and fishing by nonresidents that fly in to the area. Set-net commercial fisheries are a major use of the many river mouths and bays. Fish camps for commercial fishers are common. Outfitting and guide service is a major business in the Yakutat area. There are approximately 130 special use permits for uses such as fish camps, outfitter/guides, subsistence and trapping camps, and recreation cabins. There are many cabins and camps under special use permit. Most of the cabins are concentrated along the coast and are associated with fish camp and outfitter/guide camps. There is some wood gathering, primarily along the north and west boundaries and around cabin/camp areas.

(6) Appearance (Apparent Naturalness): Land within the roadless area generally appears unmodified. Exceptions within the area are evidence of World War II activities, former oil and gas exploration sites, abandoned fish canneries and the various cabins/camps. Highway 10, which forms the northeastern boundary, and other roads near Yakutat affect the apparent naturalness of adjacent areas within the roadless area, as do public recreation cabins and special use cabins.

(7) Surroundings (External Influences): The area to the northwest and west of the Yakutat Forelands has been modified by development. Forest Highway 10 runs along the northeastern boundary; vehicular traffic noise originating from the highway is audible for some distance into the roadless area. The Yakutat airport is just outside the roadless area; therefore, users in the western portion of the area may be subjected to some aircraft noise. Most of the activities outside the roadless area are not readily apparent to users because of the flat, rolling terrain. There are daily commercial airline flights over the southern boundary, along the coast. There is some water-borne activity in the coastal waters; however, disturbance from this traffic is minimal. There is one other roadless evaluation area and the Russell Fiord Wilderness adjacent to the Yakutat Forelands roadless area on the north, with Glacier Bay National Park to the east.

(8) Attractions and Features of Special Interest: The Pike Lakes Special Interest Area has evolved into a muskeg unusual to the Yakutat area and with a unique and distinct fauna and flora compared to surrounding areas. Attractions of the area include wildlife viewing, sports hunting and fishing, and camping in association with other activities. The numerous small lakes and streams provide a variety of fishing sites. There is driftboat-fishing traffic on the Situk River, from the put-in site at Forest Highway 10 to the landing at the mouth of the river. There are small boat anchorages at various places along the coast. The very long stretches of sandy beach provide an opportunity for beachcombing, surfing, picnicking, and "dune running" with all-terrain vehicles. Sea mammal observation is a common activity.

The area contains 21 inventoried recreation places, which cover 151,449 acres, or 45 percent of the roadless area. There are four maintained trails within the roadless area. These are the Situk River #649, Lower Dangerous River #653, Middle Dangerous River #654, and Harlequin Lake #655. These trails total 10.7 miles. There are 10 public recreational cabin sites, with airstrips associated with 7 of the locations.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: There have been minor changes to the boundaries since 1989. A road (approximately 2 miles long) has been built into the northwest corner of the roadless area. Also, a small area on the mainland north of Situk Island is no longer National Forest System land.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: Overall, the area provides very high natural integrity and high apparent naturalness. Most of the area appears to be in a natural condition, although the natural integrity has been compromised by Highway 10 in the northeast and by the seven maintained, "grass" landing strips. There are modifications in the form of extensive ATV trails, airfields, cabins, and camps, but most are widely scattered and are fairly unobtrusive, except for the concentrations of fish camps at Situk and on Blacksand Spit Island. There has been past modification of the area as evidenced by the abandoned fur farms, canneries and oil/gas exploration-sites. Developments are visible along the northwestern and western boundaries. However, because of terrain, they are not visible from a distance and do not affect the vast majority of the roadless area. These modifications to an otherwise natural landscape decrease the suitability of the area for wilderness to a minor degree.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The area provides high opportunity for solitude and very high opportunity for primitive recreation. The high degree of difficulty accessing this large area and generally low visitor numbers provide the solitary setting. Exceptions are locations along the western edge of the roadless area, and along Forest Highway 10. These are the locations people tend to concentrate. There is some disruption by small aircraft flying overhead, and powerboat use along several of the rivers and the coast. The Situk River is heavily used by driftboaters. The two commercial powerboat operations on the Situk are limited to one trip per day each.

The Pike lakes Special Interest Area is classified as a Recreational Area due to its unusual flora and fauna including unusual species of fish (northern pike) for anglers in the area.

Most of this large roadless area is far from a road or developed trail. The size of the roadless area, the lack of developed trails or roads, the steep nature of the mountainous areas with active glaciers, and the presence of both brown and black bears present a high degree of challenge and the need for woods skills and experience in much of the roadless area. Portions of the roadless area near roads, cabins, and salt-water access are less challenging.

The area provides primarily primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	172,051	51%
Semi-Primitive Non-Motorized (SPNM)	121,282	36%
Semi-Primitive Motorized (SPM)	25,997	8%
Roaded Natural (RN)	3,861	1%
Roaded Modified (RM)	3,174	1%
Unidentified	11,005	3%

The area contains 21 inventoried recreation places, which cover 151,449 acres, or 45 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	7	50,383
SPNM	11	74,067
SPM	2	24,303
RN	1	1,847
RM	4	848

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

The area provides for the full spectrum of recreation opportunities. It is evident that both off-road and highway vehicles use the area. There are 10 public recreation cabin sites (including two double-cabins) located throughout the roadless area. They receive some summer use (primarily anglers), but principle use is during the moose and bear hunting seasons.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity and apparent naturalness; opportunity for solitude and primitive recreation).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Yakutat Forelands Roadless Area Roadless Area was 20 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 22.

(4) Ecologic and Geologic Values: The Yakutat Forelands Roadless Area supports rich fish and wildlife populations, both in numbers and species. There are several glaciers in the southern part of the roadless area and extensive sand dunes along the coast. The Tanis Mesa is another unique geologic feature. This large roadless area is part of a much larger roadless area that includes other roadless areas on the Tongass National Forest, Glacier Bay National Park, and Russell Fiord Wilderness. These unroaded areas are connected to unroaded areas in Canada and Alaska, including the Wrangell-Saint Elias National Park.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed the majority of the roadless area, VCUs 366, 370, 372, 373, 377, 379, 387, and 389 as primary salmon producers. VCUs 366, 370, 379, 381, 384, and 395 were listed as primary sportfish producers.

There are numerous fish-bearing streams in this area. The Anadromous Waters Catalogue (ADF&G, 2000) identifies Williams Creek, Akwe River, Italio River, Ahrnklin River, and Situk River as major fish-bearing streams. Additional Class I streams include: Cabin Slough, Emile Creek, Gines Creek, Clear Creek, Tanis River and Lake, Muddy Creek Cannery Creek, Square Creek and Outflow, Ustay River and Triangle Lake, Dangerous River, Miller Creek, Antlen River, Seal Creek, Middle Slough, and Kunayosh Creek. These waters provide habitat for sockeye, chinook, coho, pink, and chum salmon; steelhead and cutthroat trout; and Dolly Varden char. Eulachon run in the Situk, Lost, Dangerous, Italio, Akwe, and Alsek Rivers.

The area around the Situk River contains productive fisheries with high quality chinook and coho salmon rearing habitat. The system also supports sea-run cutthroat and fall run steelhead. The area supports significant recreational fishing. Lost River and Tawah Creek are considered exceptionally productive for four of the five Pacific salmon. Lost River is a short river in the southern region of the area that supports a late run of coho salmon, which offers a food resource to predators at a critical time of year. The Dangerous River was rated low for fisheries value in the ADF&G Forest Habitat Integrity Plan, but the mouth and estuary were rated high. Annual production for the evaluation area is estimated at more than 250,000 salmon. Situk River, Ahrnklin River, Dangerous River, Italio River, Ustay River, and Emile Creek receive an estimated peak escapement of 13,200, 35,200, 0, 19,800, 4,400, and 13,200 pink salmon respectively. These rivers also have outstanding coho salmon production.

Fisheries-habitat improvement projects have occurred in several areas. Most notable are the efforts create coho habitat in the many small rock pits along Forest Highway 10. A fishpass was completed on Italio River in 1985.

(b) Wildlife Resources: The Yakutat Forelands support a rich wildlife population, both in numbers and species diversity. Large mammal species include both brown and black bears (including the glacier bear, a bluish color phase of the black bear), moose, wolverines, wolves, and mountain goats. Moose are abundant on the Yakutat Forelands. The Lost River and Tawah Creek corridor is important moose habitat (TLMP, 1997). There is a Sitka black-tailed deer population, as a result of transplant efforts in the 1940's. The small animals include mink, marten, beaver, snowshoe hare, and pika, as well as several amphibian

species. There are few resident bird species; however, the area is heavily used by migratory species, both for nesting and resting and includes waterfowl and raptors. Sandhill cranes land in the vicinity of Dangerous River and Alsek River during spring and fall migrations. The largest nesting population of trumpeter swans on the Tongass National Forest occurs on Yakutat Forelands (TLMP, 1997). One to two pairs nest at Square Lake each summer (ADF&G, 2001). Peregrine and gyrfalcons as well as snowy owls are migratory users. Bald eagles are common along the coastal zone and the fish bearing streams.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks, are closely associated with productive old growth. In addition, nine sensitive plant species, and two species proposed as sensitive, are known or suspected to occur in the Yakutat Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are numerous glaciers in the southern part of this area, including Creek Canyon, Martin, Fassett, Chamberlain, and Rodman Glaciers. A unique geologic feature is the extensive sand dunes along the coast, one of only two such sites in Alaska. Tanis Mesa is a unique geologic feature.

(5) Scientific and Educational Values: This area ranges from a constantly changing, uplifting coastal area, to a remnant area untouched by the last glacial period, to a young, developing ecosystem on immature or undeveloped soils. Of special ecological interest is the extensive sand dune area along the coast. As one of only two such sites in Alaska, this feature is rare, even when compared to the rest of the wilderness system. Their fairly recent development (estimated at less than 2,000 years), combined with unusual or uncommon plant associations, is of special interest.

Active glaciers in the south mountains are also of interest to visitors. The presence of species such as eagles, brown bears, black bears (including the glacier bear color phase), moose, and mountain goats provide interesting wildlife viewing. The many miles of sandy beach along the coastline provide for beachcombing opportunities. Cultural resource sites may provide special interest because of pre-contact mixing of peoples from the north and south, as well as relatively late prolonged direct contact with Europeans.

(6) Scenic Values: The visual character type for approximately 80 percent of the roadless area is the Cordova-Yakutat, consisting of a coastal plain marked by longitudinal beach and dune ridges, crossed by outwash plains and moraines, and backed by marine ridges to several hundred feet in height. The Brabazon Range provides a backdrop from outside the unit. The area is characterized by a great variety of water forms, including glacial streams, meandering lowland streams, and small lakes. The ocean surf is a key water form. The remaining 20 percent of the roadless area lies in the Coast Range visual character type. The landforms are massive and highly dissected. There is a great diversity in geological features including cliffs, escarpments and jagged peaks.

Less than half of the roadless area is forested. Most of the vegetation consists of groundcover or low-growing shrubs and short trees. The areas covered by forest contain stands with size classes from seedling/saplings to large mature/overmature trees. The heavily timbered areas are primarily in the eastern half. The view distance over much of the area is relatively short because of terrain and vegetation. The view to the south and west from the mountains shows most of the Yakutat Forelands, and presents an unrestricted view of the coastal area.

The roadless area generally appears unmodified. Exceptions within the area are evidence of Highway 10, the World War II activities, former oil and gas exploration sites, abandoned fish canneries and the various cabins/camps. The inland sites generally are not obtrusive, except at short range or from the air. The coastal sites are far more visible. Areas used in the past are reclaimed for the most part, with differences in vegetation the primary indicators of use. Most of the activity was, and is, concentrated along the coast, within one-half mile of the beachfront.

There is widespread evidence of vehicular use, including ATV trails and undesignated roads. Widespread ATV use is evident along the beaches, river bottoms, muskegs, and upland trails. The heaviest cabin/fish camp concentrations are at the mouth of the Situk River, on Blacksand Spit and on Blacksand Island. Many of the cabins have impromptu small aircraft landing areas on the beach fringe. The airstrips associated with the public recreation cabins are highly visible from the air. These strips are maintained with heavy-duty mowing equipment. Developed areas are visible along the northwestern boundaries. However, because of terrain, these areas are not visible from a distance and do not affect the vast majority of the roadless area.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: Highway 10, Situk Landing Road FH 9969, and Alsek Bay/River Non System Road; the small boat routes including Alsek River, Ahrnklin River, the mouth of Dangerous River to Harlequin Lake, Mouth of Situk River, and Italio River; the dispersed recreation areas including Square Lake, Gines Creek, Alsek River Delta, Harlequin Lake, Italio Lake Big Game Camp, Ahrnklin River, Alsek River Big Game & Fish Camp, Dangerous River Guide Camp, Highway 10 Corridor, Gulf of Alaska Coastline, Tanis River Mesa Guide Camp, Italio River, Lower Dangerous River, Middle Slough River, and Dangerous River; the Yakutat community; the Square Lake, Tanis Mesa, Alsek River, Harlequin Lake, Italio River, Middle and Lower Dangerous River, and Middle Situk public recreation cabins; the Alsek River Rafting Campsite private resort; and the Dangerous River (654), Italio River, Lower Dangerous River, Harlequin Lake, and Situk River Cabin hiking trails.

Approximately 28 percent of the roadless area was inventoried as Variety Class A, having landscape diversity unique for the character type. Thirty-six percent of the area was rated as Variety Class B, possessing landscape characteristics common for the character type. Approximately 32 percent of the area possesses a low degree of landscape diversity (Variety Class C). Approximately 4 percent of the area was not inventoried for Variety Class type.

The majority of the area, 93 percent, is inventoried with an Existing Visual Condition (EVC) I, which appears untouched by human activity. Approximately 2 percent of the area has as an EVC II, where the average visitor does not notice changes to the landscape. The inventory identifies approximately 1 percent of the area as EVC III, where the average person notices changes in the landscape, but they do not attract attention. Another 1 percent is rated with an EVC IV, where changes in the landscape are easily noticed by the average visitor, and may attract some attention. Almost 4 percent of the area was not inventoried for EVC.

(7) Social, Cultural, and Historical Values: Human settlement in the area is believed to have started about 1,000 years ago, with the people coming from the north (probably Eyak from the Copper River). Tlingit occupation from the south began approximately 300 years before the present. European ventures into the area started in the late 18th century with Russian and English traders. A Russian farming settlement was established in the approximate location of Yakutat in 1796. Hostilities between the Russians and the Native population ended when the Yakutat Tlingits removed the settlement in 1805. Little contact between whites and Yakutat Tlingits occurred from 1805 to about 1874. Activities since 1874 have included mining, fish canneries, fur farms (mink and fox), manufactured native goods, and tourism. Salmon processing became a major industry, with the first salmon cannery constructed in 1902. Others, located along the Gulf coast, followed over the next 20 or so years. In the early 20th century, a railroad was planned from Yakutat to Dry Bay for the service of the various canneries; however construction eventually went only to Johnson Slough, with lines serving the Situk and Lost Rivers. There was a large military presence, with attendant activities, during World War II. More recent activities within or adjacent to the roadless area have included commercial logging operations, commercial fishing, and outfitter/guide services for sport fishing and hunting. No VCUs are listed among the VCUs with highest community use value or with highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The roadless area is long and relatively narrow, with a length of about 53 miles and a width varying from approximately seven to 15 miles. Most of the roadless area is defined by a physical boundary, i.e., the coastline, Dry Bay and the Alsek River, mountain ridgelines or Forest Highway 10. However, approximately 24 miles of the northeast boundary is a “point-to-point” straight line, and is not tied to readily identified physical points. In addition, the, northwestern boundary abuts private lands, roads or development. The presence of roads and/or private lands to the west may reduce the manageability of the area. It would be reasonable to combine this roadless area with the Brabazon Addition (338) since there are no topographic features to delineate a boundary between the two roadless areas.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Cruise ships travel to Glacier Bay National Park. There are daily scheduled commercial flights into Yakutat. Sport fishing and hunting are popular in the area. Moose hunting and steelhead fishing are the major activities. Recreation potential includes the opportunity for additional public recreation cabins and trail corridors along several of the rivers and accessing several lakes. Trailheads would have to be accessed from the coast, from aircraft landing strips, or from the road system to the northwest and northeast. Management as a wilderness might conflict with the use of power mowers to maintain the seven existing airfields in the roadless area. It also might conflict with special use cabins and some ATV use.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resource: There are no current plans for fish habitat enhancement projects in the roadless area. However, the Forest Service is investigating the possibility of bioenhancement and habitat manipulation on a limited basis.

(4) Wildlife Resources: There are no current plans for wildlife habitat enhancement projects in the roadless area. However, the Forest Service is investigating several browse enhancement possibilities.

(5) Timber Resources: There are 34,829 acres inventoried as productive old-growth forest and no acres mapped as second growth due to harvest in the roadless area. Of this, approximately 21,435 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 4,137 acres or 1 percent of this roadless area are estimated to be suitable for timber production. Approximately 2,366 of the suitable acres are mapped as high-volume old growth; of these acres, 2,216 are mapped as high-volume, coarse-canopy old growth.

The potential for larger scale commercial timber management is low, even for high quality, very high volume stands. More local small-scale operations may be more adjustable to the fluctuating timber market conditions. Timber stands rated moderate to high for management operability are concentrated in VCUs 379, 382, 386, 387, 383, and 389. Outside of these VCUs, the majority of the timber is not considered operable, or does not constitute a significant component.

(6) Fire, Insects, and Disease: The area has no significant fire history. There are no epidemic insect or disease conditions.

(7) Minerals: The opportunity for mineral development appears low. There are no known deposits of minerals important for development. This area contains an estimated 115,938 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); all of these acres are considered to have low potential for development.

Oil and gas exploration has occurred and the potential for development appears relatively high. The U.S. Geological Survey (USGS) has identified the Yakutat Forelands as a “Most Favorable Petroleum Reserve Area”. However, development activities have not been initiated. The USGS Mineral Resource Data website (2001) indicates that there are eight prospects in the area for iron, titanium, gold, platinum, and chromium.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area. An existing State road corridor is adjacent to the northern part of the roadless area.

(9) Water Availability and Use: Water demand is created by the public recreation cabins, the outfitter/guide cabins, and the private resort in this area. There are no existing or planned hydroelectric or domestic water projects within the roadless area to accommodate these demands.

(10) Areas of Scientific Interest: The roadless area supports rich fish and wildlife populations, both in numbers and species diversity. There are several glaciers in the southern part of the roadless area and extensive sand dunes along the coast. Tanis Mesa is another unique geologic feature.

(11) Land Use Authorizations: There are approximately 130 special use permits for uses such as fish camps, outfitter/guides, subsistence and trapping camps, and recreation cabins. The potential for an increase in the number of permits is high, however carrying capacities may restrict such increases. The increase will be in applications for fish camps, outfitter/guide activities, and facilities associated with subsistence and outfitter/guide activities.

(12) Land Status: The entire roadless area is a part of the National Forest System. Encumbered land within the roadless area is located in the west, adjacent to land owned by the Yak-Tat Kwaan Village Corporation.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Local residents have a strong interest in maintaining the area for commercial and subsistence fishing. The income generated from fishing by non-residents who fly into the area is important to the local economy. The general feelings of the local residents appear to favor a primitive/semi-primitive designation without the area becoming a wilderness in order to avoid restrictions associated with wilderness designation and the elimination of future management options.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. The Yakutat Forelands, the area between the Dangerous and Alsek Rivers and between the coast and the Brabazon Range (137 M out of 338 M acres), was included in the bill. The Yakutat Forelands area was designated as LUD II by the Tongass Timber Reform Act of 1990. In 2001, HR 2908 proposed managing the entire roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The City of Yakutat recommended that the fisheries values and fish habitat protection be of paramount importance in managing the Foregrounds. The Foregrounds should be managed for fish, wildlife, subsistence, and visual resources. Small scale and personal use timber harvest should be permitted. The Southeast Alaska Conservation Council and others recommended against road building and logging because of the effects of logging on the education and recreational values of the area. They stated that the area merited special protection for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. The National Audubon Society recommended that the area be managed for primitive recreation. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated on the Tongass National Forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless are available.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as having important fish and wildlife habitat and populations; although not a top priority for protection, it ranked in their top third among all roadless areas. The area adjoins Glacier Bay National Park, and the Russell Fiord Wilderness Area.

The Alaska Department of Fish and Game rated the Yakutat Forelands roadless area (Italio, Akwe, Tanis Mesa, and Alsek Rivers) as the fourth highest priority for protection in northern Southeast Alaska. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

SEACC recommended that the remaining unlogged portions of the Yakutat area, including Roadless Areas 338, 339, and 341, should be protected through a combination of LUD II and wilderness designations as in Alternative 6.

The Yakutat Tlingit Tribe supported "…the present land management scheme." and stated that it did not want to see "…changes in the Wilderness designation…."

Some individuals recommended permanent protection for the entire area.

(2) Nearby Roadless and Wilderness Areas and Uses: This large roadless area is part of a much larger unroaded area that includes the Brabazon Addition (338) and the Upper Situk (341) Roadless Areas, Glacier Bay National Park, and Russell Fiord Wilderness. These roadless areas are connected to other unroaded areas in Canada and Alaska, including the Wrangell-Saint Elias National Park and other roadless areas on the Tongass National Forest. These areas are used primarily for recreation (including tourism) and subsistence.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	150	185
Sitka (Pop. 8,835)	180	200
Cordova (Pop. 2,454)	220	275
Anchorage (Pop. 260,283)	350	635

Yakutat has twice-daily commercial air service, both north- and southbound. There is no ferry service. The nearest Alaska Marine Highway terminals are at Hoonah to the southeast and Cordova to the west.

(4) Relative Contribution to the National Wilderness Preservation System: The Yakutat Forelands Roadless Area is located on the mainland, southeast of Yakutat. The area adjoins National Forest System, State, and private lands to the northwest and the Glacier Bay National Park to the southeast. Forest Highway 10, the Russell Fiord Wilderness and the Brabazon Range bound the Yakutat Forelands on the northeast. The southwestern boundary is the Gulf of Alaska, from Dry Bay to Johnson Slough. Approximately 80 percent of the roadless area is relatively flat, with elevations ranging from sea level to approximately 200 feet. The lowland terrain is characteristic of formerly glaciated topography, glacial outwash plains with lateral and terminal moraines, separated by low, flat areas with numerous streams and rivers as well as large marshes and muskegs. The rivers and streams are low gradient and follow meandering and braided channels, with wide floodplains. The northeastern half also contains many lakes, the largest is over 500 acres. The northeast quadrant contains the southern slopes of the Brabazon Range, with elevations ranging from 200 feet to approximately 4,980 feet. This mountainous area is steep and highly dissected with numerous stream courses. The area contains several glaciers. The Gulf beach area is subject to drastic change due to open-water wave activity and ocean storms. The coastal area contains an extended stretch of sand dunes, formed by the wind. This dunes area is one of two found in Alaska.

The area generally appears to be natural and unmodified. There are modifications in the form of Highway 10, ATV trails, airfields, cabins, and camps, but most are widely scattered and are fairly unobtrusive, except for the concentrations of fish camps at Situk and on Blacks and Spit Island. The area has overall very high natural integrity and high apparent naturalness. Opportunities for solitude are high and opportunities for primitive recreation are very high within the area.

The area has moderate to high scenic qualities; approximately 28 percent of the landscape is considered distinctive from a scenery standpoint. There are numerous glaciers in the southern part of this area, including Creek Canyon,

Martin, Fassett, Chamberlain, and Rodman Glaciers. A unique geologic feature is the extensive sand dunes along the coast, one of only two such sites in Alaska. Tanis Mesa is a unique geologic feature. Outfitting and guide service is a major business in the Yakutat area. There are approximately 130 special use permits for fish camps, outfitter/guides, subsistence and trapping camps, and recreation cabins.

The roadless area includes about 20,998 acres of high-volume, old-growth forest. Of these acres, approximately 20,030 are mapped as high-volume, coarse-canopy old growth. It ranks among the top five Tongass roadless areas in terms of acres of high-volume, coarse-canopy old growth; the vast majority of this old growth is contained within non-development LUDs.

Approximately 80 percent of the Yakutat Forelands Roadless Area is classified as being in the Yakutat Forelands Biogeographic Province and makes up about 78 percent of the province. It is one of two roadless areas that make up about 82 percent of the province. About 2 percent of the Yakutat Forelands Province is in designated wilderness, and about 39 percent is in designated LUD II. The remaining 20 percent of the Yakutat Forelands Roadless Area is located in the Yakutat/Glacier Bay Uplands Biogeographic Province and makes up about 7 percent of that province. It is one of three roadless areas that collectively make up about 62 percent of the province. About 37 percent of the Yakutat/Glacier Bay Uplands Province is in designated wilderness.

The Yakutat Forelands Roadless Area lies within two ecological sections; it represents 8 percent of the St. Elias-Fairweather Mountains Ecological Section and 69 percent of the Northern Gulf Forelands Ecological Section. The St. Elias-Fairweather Mountains Ecological Section is well represented by existing wilderness and other non-development LUDs (35 and 64 percent, respectively, including 1 percent in LUD II). The Northern Gulf Forelands Ecological Section is well represented by non-development LUDs (72 percent, including 33 percent in LUD II) with an additional 9 percent in existing wilderness.

The majority of the Yakutat Forelands Roadless Area (79 percent) is contained within the Yakutat-Lituya Forelands Ecological Subsection. This portion of the roadless area represents 69 percent of the entire ecological subsection, which is well represented by LUD II and other non-development LUDs (33 and 39 percent, respectively) with an additional 9 percent in existing wilderness. The remaining 21 percent of this roadless area is within the St. Elias-Fairweather Icefields Ecological Subsection. This portion of the roadless area represents 9 percent of the entire ecological subsection, which is well represented by existing wilderness and other non-development LUDs (27 and 72 percent, respectively including 1 percent in LUD II).

The Yakutat Forelands Roadless Area was rated 22 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 38th from the highest (along with eight other roadless areas) among the 109 Tongass inventoried roadless areas.

There is strong local and national support for managing the roadless area in an unroaded condition. There is some national support for designating the northern two-thirds of the roadless area as wilderness and for managing the remainder in an unroaded condition. The roadless area contains one of the highest acreages of high-volume, coarse-canopy old growth among Tongass roadless areas. Designation of the roadless area as a wilderness would expand the Russell Fiord Wilderness and include the glaciers, sand dunes and geologic mesa formation. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate.

V. Environmental Consequences

The Yakutat Forelands Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, or 4 is implemented. Approximately 93 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 7 percent of the roadless area. The land in the development LUDs includes an estimated 4,137 acres that are suitable for timber production (40 percent of the suitable acres on the Yakutat Ranger District). Approximately 2,216 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains an estimated 115,938 acres of undiscovered locatable mineral resources. All of these acres are considered to have low potential for development. The very heavy recreation and special use program would continue. The values, including the scenic, geologic, commercial recreation, and ecologic values, associated with the natural settings of the roadless area are mostly protected by the Forest Plan.

There is a small portion of the roadless area in the northwest tip near the highway that would allow timber management activities.

Under Alternative 2, the existing LUD II area, approximately 137,099 acres, would be converted to Recommended Wilderness LUD. This would not affect timber management because this area is currently allocated to a non-development LUD. The area suitable for timber production would not change from Alternative 1. The ongoing recreational use, special uses, and mineral management that occur within the designated LUD II area could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the existing LUD II portion of the roadless area, including the scenic, geologic, commercial recreational, and ecologic values, would continue to be provided long-term protection if designated wilderness.

Under Alternative 5, a 219,651-acre portion of the LUD II, Remote Recreation, and Semi-remote Recreation LUDs would be converted to Recommended Wilderness LUD. The ongoing recreational use, special uses, and mineral management that occur within the designated LUD II area could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the southern two-thirds of the roadless area, including the scenic, geologic, commercial recreational, and ecologic values, would be provided long-term protection if designated wilderness.

Under Alternative 6, the majority of the Remote Recreation, Special Interest Area, Old-growth Habitat, Semi-remote Recreation, Scenic Viewshed, and Timber Production LUDs would be converted to Recommended LUD II and the remainder converted to Recommended Wilderness LUD. No timber harvest would be allowed in the roadless area. Mineral prospecting and development, some special uses, and some recreation developments could continue in the LUD II areas but could be restricted in the Recommended Wilderness LUD area. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic, geologic, commercial recreational, and ecologic values, would be provided long-term protection if designated LUD II or wilderness.

Under Alternatives 7, a 232,366-acre portion of the roadless area in Remote Recreation, Special Interest Area, Old-growth Habitat, Semi-remote Recreation, LUD II, Scenic Viewshed, and Timber Production LUDs would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed in the Recommended Wilderness LUD. The area suitable for timber production would be reduced to 2,682 acres. The ongoing recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. Similar to Alternative 5, the values associated with the natural settings of the southern two-thirds of the roadless area, including the scenic, geologic, commercial recreational, and ecologic values, would be provided long-term protection if designated wilderness.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed and the ongoing recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic, geologic, commercial recreational, and ecologic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 339 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness		137,099			219,651	12,716	232,366	337,374
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area	2,067	2,067	2,067	2,067	2,067			
Remote Recreation	51,031	51,031	51,031	51,031				
Enacted Municipal Watershed								
Old-growth Habitat	3,248	3,248	3,248	3,248	3,248			
Semi-remote Recreation	121,189	121,189	121,189	121,189	89,669		89,670	
Recommended LUD II						187,559		
LUD II	137,099		137,099	137,099		137,099		
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	9,477	9,477	9,477	9,477	9,477		9,279	
Modified Landscape								
Timber production	13,262	13,262	13,262	13,262	13,262		6,059	
TOTAL	**337,374**	**337,374**	**337,374**	**337,374**	**337,374**	**337,374**	**337,374**	**337,374**
Suitable Timber Lands	4,137	4,137	4,137	4,137	4,137	**0**	2,682	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Upper Situk (341)

ACRES (NFS): 18,411

BIOGEOGRAPHIC PROVINCE: Yakutat Forelands

ECOLOGICAL SECTION: Northern Gulf Forelands

2003 WILDERNESS ATTRIBUTE RATING: 19

I. Overview and Description

(1) Location and Access: The Upper Situk Roadless Area is located on the mainland, east of Yakutat. The area adjoins State and private lands to the southwest, Forest Highway 10 on National Forest Systems lands to the south, and the Russell Fiord Wilderness to the west. The northwestern boundary is Yakutat Bay. The roadless area is approximately 6 miles east of Yakutat and 190 miles northeast of Juneau.

There are several small anchorages suitable for small boats along the coastline of Yakutat Bay. There is floatplane access along the Bay, as well in several lakes in the northwestern portion of the roadless area. Forest Highway 10 goes from Yakutat to the Dangerous River, providing vehicle access to the entire southern boundary of the roadless area. Connecting road systems and serving timber harvest area provide access to large portions of the roadless area. Access away from water and from roads is by foot or helicopter. There are no hiking trails in the roadless area.

(2) History: Human settlement in the area is believed to have begun about 1,000 years ago, with people coming from the north (probably Eyak from the Copper River). Tlingit occupation from the south began approximately 300 years before the present. European ventures into the area started in the late 18th century with Russian and English traders. A Russian farming settlement was established in the approximate location of Yakutat in 1796. Hostilities between the Russians and the Alaska Native population ended when the Tlingits removed the settlement in 1805. Little contact between whites and the Yakutat Tlingits occurred from 1805 to about 1874. Activities within or adjacent to the roadless area since 1874 have included mining, fish canneries, fur farms, manufactured native goods, and tourism. Tourism was first developed in the 1880s to view Mount Saint Elias and the various glaciers. Salmon processing became a major industry after the construction of the first cannery in 1902. Others followed over the next 20 or so years.

There was a large military presence, with attending activities, during World War II. More recent activities, within or adjacent to the roadless area, have included commercial logging operations, commercial fishing, and outfitter/guide services for sports fishing and hunting.

(3) Geography and Topography: Approximately half the roadless area is relatively flat. Elevations in this area generally range from sea level to approximately 200 feet. The highest point is about 1,000 foot above sea level. The terrain is characteristic of formerly glaciated topography, glacial outwash plains with lateral and terminal moraines, separated by low, flat areas with numerous streams and rivers, as well as large marshes and muskegs. There are some areas, such as around Pike Lakes, that were unglaciated in the last glacial period. These remnant areas show the characteristics of an old-aged landform with highly developed soil profiles. The rivers and streams are low gradient and follow wandering channels with wide floodplains. The roadless area includes several islands in Yakutat Bay.

Relief is such that a major runoff episode may completely change the location of stream courses and may combine two or more totally divergent streams into one system. If the Hubbard Glacier, which is located to the northwest, closes off Russell Fiord, the resulting lake could reach overflow in a short period of time. The headwaters of the Situk River would be the overflow channel, thereby drastically changing the landscape in this area.

The roadless area contains many lakes, including the Pike Lakes in the headwaters of the Ahrnklin River and Lake Redfield, which is over 950 acres. The Yakutat Bay beach area is subject to change due to open-water wave activity and ocean storms. There are 7 miles of shoreline on saltwater. Freshwater lakes total 973 acres. There are 53 acres of small islands. There is no alpine tundra, snow, ice, or rock features mapped in the area.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the Yakutat Forelands Biogeographic Province. The province includes Glacier Bay north to Yakutat Bay. The area is very young, with nearly flat landscape and active isostatic rebound (uplifting of the ground after the glaciers have receded). Most surfaces vary from 200 to 1,500 years old. Dune formation and succession are an on-going processes due to glacial rebound and active wave action. The climate is typical of the coastal maritime zone. The total annual precipitation at Yakutat is 135 inches. Yakutat has a 33-year snowfall average of 219 inches.

Ecological Section/Subsection. The Upper Situk Roadless Area is contained entirely within the Northern Gulf Forelands Ecological Section (M245B). This area is represented by one ecological subsection (see table below). The Yakutat Lituya Forelands Ecological Subsection is a vast coastal plain that was formed by the seaward deposition of sediments from the mountains. The soils of the gently sloped area include unconsolidated glacial, alluvial, and marine deposits. The coast is spotted with parabolic dunes formed from outwash sand. The low gradient terrain prevents rapid drainage, and the majority of land cover is wetland. The flat land also allows complex braided stream systems with vast floodplains. Where slight elevations exist, Sitka spruce, hemlock, or cottonwood trees are present (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Northern Gulf Forelands	Yakutat Lituya Forelands	100%

(b) Soils: The majority of the soils for the Upper Situk lowlands are youthful soils of glacio-fluvial and fluvial origin. The base material is variable and consists of igneous, metamorphic, and sedimentary rocks. Terrain is generally gently sloping. Other features, such as mature soils (unglaciated remnants) occur but only to a limited extent. Recent glaciation and on-going uplift has, and does, affect soil development. Groundwater over most of the area is at or near the surface. Large portions of the roadless area are poorly drained organic soils.

(c) Vegetation: Much of the vegetation, even in the forested areas, is marsh and muskeg species, with willows, cottonwoods, and alders on the drier sites. The wetland species are primarily sphagnum moss, sedges, and heathers. The drier, non-forest sites contain low-growing species such as devil's club, salmonberry, blueberry, copper bush, hellebore, ferns, skunk cabbage, and huckleberry, over a carpet of mosses and liverworts. Forested areas contain primarily Sitka spruce and/or western hemlock. Approximately 752 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

Lodgepole pine is found in the Pike Lakes area and is at the western edge of its range. Other unique Pike Lakes area plant species are Oregon crabapple, deer cabbage, Labrador tea, and mountain hemlock.

There are approximately 16,217 acres mapped as forest land of which 6,885 acres (42 percent) are mapped as productive old-growth forest. Of the productive old growth, 2,267 acres (33 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 1,070 acres of high-volume, coarse-canopy old growth. There are no acres of second growth forest where timber harvest has occurred in the past.

(d) Fish Resources: Five species of Pacific salmon spawn and rear in the area. Steelhead and cutthroat trout, stickleback, Dolly Varden char, and smelt are found in the many lowland rivers and streams. The Anadromous Waters Catalogue (ADF&G, 2000) identifies Humpback Creek, Upper Situk

River, and Lake Redfield as fish-bearing waters in this area. The headwaters of two major stream systems (the Situk and Arhnklin Rivers) are in the area. These stream systems were identified by the Alaska Department of Fish and Game (ADF&G) as important for producing salmon. The only population of northern pike in Southeast Alaska occurs in five lakes in the roadless area known as the Pike Lakes.

(e) Wildlife Resources: The Yakutat Forelands area (which includes the Upper Situk roadless area) supports a rich wildlife population, both in numbers and species diversity. Larger mammal species include brown and black bears, moose, wolverines, wolves, and mountain goats. There is a Sitka black-tailed deer population that is a result of transplant efforts in the 1940s. Smaller animals include mink, marten, beaver, and snowshoe hare, as well as several amphibian species.

There are few resident bird species; however, the area is heavily used by migratory species, including waterfowl (trumpeter swan) and raptors (bald eagle and northern goshawk).

(5) Management Direction and Current Uses: This roadless area was allocated to five Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These five LUDs are Old-growth Habitat, Semi-remote Recreation, Timber Production, Modified Landscape, and Scenic Viewshed.

LUD	Acres
Timber Production	3,279
Scenic Viewshed	214
Modified Landscape	57
Semi-remote Recreation	4,328
Old-growth Habitat	10,534

Approximately 19 percent of the roadless area was allocated to a development LUD (Timber Production, Modified Landscape, and Scenic Viewshed). The Timber Production LUD was assigned to approximately 18 percent of the roadless area. Approximately 1 percent of the roadless area was allocated to the Scenic Viewshed LUD.

Most of the roadless area, 81 percent, was allocated to a non-development LUD (Old-growth Habitat, Semi-remote Recreation). Approximately 57 percent of the roadless area was allocated to the Old-growth Habitat LUD. The Semi-remote Recreation LUD was assigned to approximately 24 percent of the roadless area. Land allocated to this LUD includes the small islands in Yakutat Bay associated with the roadless area.

Uses include sport fishing and hunting, subsistence fishing, hunting and trapping, and commercial fishing. Outfitting and guide service is a major business in the area. There are 10 special use permits for fish and subsistence camps and outfitter/guide activities. There are no public recreation cabins in the roadless area.

There is one trail, located along the Situk River, north from Forest Highway 10. Although oil and gas exploration has been done in the recent past, no exploration or development activities are occurring at present. Other than fisheries habitat enhancement, few Forest Service management activities have occurred within the roadless area.

(6) Appearance (Apparent Naturalness): The Upper Situk area generally appears unmodified. The appearance of areas adjacent to roads and timber harvest has been effected by these developments.

(7) Surroundings (External Influences): The Russell Fiord Wilderness Area is located adjacent to the Upper Situk Roadless Area on the north, and the Yakutat Forelands (#339) Roadless Evaluation Area is located to the south of Forest Highway 10. The area to the west of the roadless area, which includes the city of Yakutat, has been highly modified by developments. The timber management related developed areas that cross, or nearly cross, the roadless area in three places are primarily associated with a blowdown episode in 1981. Forest Highway 10 runs along the entire southwestern boundary. The Yakutat airport is about 7 miles from the roadless area and people using the roadless area may be disturbed by noise from airplanes. There are commercial flights over the coast to the south. Most of the activities outside the roadless area are not visually apparent to users because of the terrain and vegetation features; however, traffic noise on Forest Highway 10 is audible for some distance into the roadless area. There is some water-borne activity in the coastal waters; however, disturbance from these activities is minimal.

(8) Attractions and Features of Special Interest: Attractions include wildlife viewing, sports hunting and fishing, camping, canoeing, and kayaking. The numerous small lakes and streams provide a variety of fishing sites. There are small boat anchorages at several places along the coast. There are five lakes with northern pike, the only northern pike in Southeast Alaska.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: A portion of the 1989 roadless area near the western boundary is no longer National Forest System land. Other boundary changes resulted from more accurately mapping the adjacent developed areas.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: Most of the area is unmodified. Modifications include cabins and camps, which are widely scattered and are fairly unobtrusive, and all-terrain vehicle (ATV) trails. The western portion of the area has received off-road vehicle use, particularly in the muskegs. Signs of OHV use are apparent from the air, but are less so from ground level. The western and southwestern boundaries are defined by adjacent developments. Past modification within the area has been minor and included fur farms. These modifications have a minor effect on the area's suitability for wilderness classification based on natural integrity. Overall, the area has high natural integrity and apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The area has moderate opportunity for solitude and relatively high opportunity for primitive recreation, especially when the adjacent roadless lands are factored in. The area is relatively easy to access, has a moderate degree of visitor use, and is relatively close to various activities, including timber harvest on private and adjacent National Forest System lands and traffic on Forest Highway 10. There are minor disruptions by small aircraft flying overhead, commercial aircraft landing and taking off at the airport in Yakutat, and powerboat use along the coast. However, Lake Redfield, Pike Lakes and other locations away from the concentrated use areas are relatively isolated and provide a greater opportunity for solitude.

As with all backcountry areas on the Tongass, the opportunity for challenge and risk in this area is high. The climate, the rugged terrain, the isolation and distance from population centers with medical facilities, the barriers to communication, and the presence of large wild animals all contribute to the need for good preparation and knowledge of backcountry survival skills for anyone using this area. Hypothermia and bear encounters are just two examples of the many risks that must be considered before traveling in the backcountry of Southeast Alaska.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	1,940	11%
Semi-Primitive Non-Motorized (SPNM)	11,692	64%
Semi-Primitive Motorized (SPM)	872	5%
Roaded Modified (RM)	3,898	21%

The area contains seven inventoried recreation places, which cover 15,319 acres (83 percent) of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	3	1,896
SPNM	2	9,318
SPM	1	824
RM	6	3,281

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are no public recreation cabins in the roadless area. There is one trail located along the Situk River north from Forest Highway 10.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Upper Situk Roadless Area Roadless Area was 22 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 19.

(4) Ecologic and Geologic Values: The roadless area is home to the only naturally occurring populations of northern pike in Southeast Alaska. The population is genetically unique and considered a unique race.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCU 366 as a primary salmon and sportfish producer. VCU 373 was listed as a primary salmon producer.

Five species of Pacific salmon, valuable for commercial, subsistence and sport use, spawn and rear in the area. Steelhead and cutthroat trout, stickleback, Dolly Varden char, and smelt are found in the many lowland rivers and streams. The Anadromous Waters Catalogue (ADF&G, 2000) identifies Humpback Creek, Upper Situk River, and Lake Redfield as fish-bearing waters in this area. The headwaters of two major stream systems (the Situk and Arhnklin Rivers) are within the roadless area. These rivers were identified by the ADF&G as important salmon spawning areas. There is no estimate for fish production just for the headwater areas, but total annual production for the two rivers is estimated at more than 80,000 salmon. A unique species, the northern pike, is found in Pike Lakes. This is the only known population of this species in Southeast Alaska.

(b) Wildlife Resources: The Yakutat Forelands area (which includes the Upper Situk roadless area) supports a rich wildlife population, both in numbers and species diversity. Larger mammal species include brown and black bears, moose, wolverines, wolves, and mountain goats. There is a Sitka black-tailed deer population that is a result of transplant efforts in the 1940s. The smaller animals include mink, marten, beaver, and snowshoe hare, as well as several amphibian species including wood frogs and boreal toads.

There are few resident bird species; however, the area is heavily used by migratory species, including waterfowl (trumpeter swan) and raptors (bald eagle and northern goshawk).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, Queen Charlotte goshawk, and northern pike. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Nesting trumpeter swans have been found within the Upper Situk Roadless Area. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks, are closely associated with productive old growth. Northern pike occur in five lakes in the roadless area. In addition, nine sensitive plant species, and two species proposed as sensitive, are known or suspected to occur in the Yakutat Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are no glaciers in this area. The Pike Lakes area is of geological interest because of the unique residual soils/geologic features.

(5) Scientific and Educational Values: The Pike Lakes area is of ecological and geological interest because of the unique plant associations, fish species, and residual soils/geologic features. The area ranges from a young, developing ecosystem on immature or undeveloped soils to a remnant area untouched by the last glacial period. The presence of wildlife species such as eagles, brown bears, black bears (including the glacier bear color phase), moose, and the many different migratory bird species provides opportunities for wildlife observation. The coastline provides for beachcombing opportunities.

(6) Scenic Values: The visual character type for the evaluation area is the Cordova-Yakutat, consisting of a coastal plain marked by longitudinal beach and dune ridges, crossed by outwash plains and moraines and backed by marine ridges, which are several hundred feet in height. The area is characterized by a great variety of water forms, including glacial streams, meandering lowland streams, and small lakes. The ocean surf is a key water form. The area immediately north of the roadless area lies in the Coast Range visual character type, forming a strongly contrasting landform. The view distance within much of the area is relatively short because of the flat, rolling terrain combined with dense vegetation.

Developed areas are visible along the western and southwestern boundaries. In addition, some of these developments cross, or nearly cross, the roadless area in three places. These areas are also visible from some points within the roadless area. However, because of terrain, these timber management areas are not visible from a distance, and does not affect the majority of the roadless area. Most of the vegetation consists of groundcover or low-growing shrubs and short trees. Approximately 15 percent of the area supports forests. The heavily forested areas are primarily in the middle half of the roadless area. The coastal sites are more visible. Sites used in the past have mostly been reclaimed by vegetation. Most of the activity was, and is, located along the coast.

ATV use is evident in the muskegs. This activity does affect the apparent naturalness from close range. The overall impact is low in this area.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Highway 10 public use road, the Situk River to Situk Lake, and Gilbert Spit to Eleanor Cove small boat routes, the dispersed recreation area on the Highway 10 corridor, Situk Lake hiking trail, and the Eleanor Cove boat anchorage.

Approximately 61 percent of this area is inventoried in Variety Class A, which has landscape diversity unique for the character type. Six percent of the area is rated as Variety Class B, which possesses landscape characteristics common for the character type. Approximately 32 percent of the area possesses a low degree of landscape diversity (Variety Class C).

The majority of the area, approximately 91 percent, is inventoried with an Existing Visual Condition (EVC) Type I, which is a landscape that appears untouched by human activity. One percent is inventoried in EVC III, where changes in the landscape may be seen by the average person, but appear natural. About six percent of the area was inventoried as an EVC IV, where changes in the landscape are easily noticed by the average visitor, and may attract some attention. About one percent of the area has an EVC V, where changes to the landscape are obvious to the average visitor and appear to be major disturbances.

(7) Social, Cultural, and Historical Values: Human settlement in the area is believed to have begun about 1,000 years ago, with the people coming from the north (probably Eyak from the Copper River). Tlingit occupation from the south began approximately 300 years before the present. European ventures into the area started in the late 18th century with Russian and English traders. A Russian farming settlement was established in the approximate location of Yakutat in 1796. Hostilities between the Russians and the Alaska Native population ended when the Yakutat Tlingits removed the Russians in 1805. Little contact between whites and the Tlingits occurred from 1805 to about 1874. Activities within or adjacent to the evaluation area since 1874 have included mining, fish canneries, fur farms, manufactured native goods and tourism. Tourism was first developed in the 1880s to view Mount Saint Elias and the various glaciers. Salmon processing became a major industry, with the first cannery constructed in 1902. Others followed over the next 20 or so years. There was a large military presence, with attending activities, during World War II.

Uses include sport fishing and hunting, subsistence fishing, hunting and trapping, and commercial fishing. Outfitting and guide service is a major business in the area. There are ten special use permits for fish and subsistence camps and outfitter/guide activities. There are no public recreation cabins in the roadless area.

No VCUs are listed among the VCUs with highest community use value or with highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

There is one developed trail going north from Forest Highway 10 along the Situk River. Other than recreation and fisheries habitat enhancement, few Forest Service management activities have occurred within the roadless area.

(8) Manageability as Wilderness and Boundary Conditions/Changes: The roadless area is a long, very narrow strip, approximately 25 miles long and averaging less than 2 miles in width (ranging from a few hundred feet to more than 5 miles). However, the entire northern boundary is common with the Russell Fiord Wilderness. The southwestern and northwestern boundaries are defined by a physical boundary (Forest Highway 10 and Yakutat Bay). Roads and associated developments cross, or nearly cross, the roadless area in three places, dividing the mainland portion of the roadless area into four smaller segments. The northeastern boundary is the Russell Fiord Wilderness boundary, which is legally described, but not tied to topographic features. The western boundary abuts private lands and the southwestern boundary abuts Highway 10. The presence of roads and/or private lands to the west and other developments, which cross, or nearly cross, the roadless area could affect the manageability of the area as wilderness. While the wilderness character of some portions of the roadless area may be questionable, other portions, if left unroaded, would compliment the Russell Fiord Wilderness Area.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Cruise ships travel to Glacier Bay National Park. There are daily scheduled commercial flights into Yakutat. Recreation potential includes the opportunity for trails accessing several lakes. Trailheads could easily be accessed from the coast or from the road system to the southwest. Sport fishing and hunting are popular in the area; moose hunting and steelhead fishing are major activities.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resource: No fish habitat enhancement projects are currently planned.

(4) Wildlife Resources: No wildlife habitat improvement projects are planned.

(5) Timber Resources: There are 6,885 acres inventoried as productive old-growth forest in the roadless area and there are no acres mapped as second growth. Of this, approximately 5,205 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,236 acres (7 percent) of this roadless area are estimated to be suitable for timber production. Approximately 453 of the suitable acres are mapped as high-volume old growth; of these acres, 333 are mapped as high-volume, coarse-canopy old growth.

The potential for larger scale commercial timber management is low, even for high quality, very high volume stands. Smaller scale local operations may have more potential. The existing road system combined with the flat terrain makes access relatively simple; however, marsh areas restrict road construction options, although not to an excessive degree. Most of the operable timber stands are located in VCUs 364C, 366C, 373C, and 375C. These stands are generally mature/overmature and have high volumes per acre.

(6) Fire, Insects, and Disease: The area has no significant fire history. There are no epidemic insect or disease conditions.

(7) Minerals: The opportunity for mineral development appears low. This area contains an estimated 7,627 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have low potential for development.

Oil and gas exploration has been conducted in the past in the vicinity of the roadless area and the potential for development appears to be high. The entire Forelands have been identified by the USDI, Geologic Survey as a "Most Favorable Petroleum Reserves Area." However, development activities have not been initiated.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area.

(9) Water Availability and Use: There are no public recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: There are opportunities to study fish, including the only northern pike populations in Southeast Alaska, wildlife, and geologic processes.

(11) Land Use Authorizations: There are 10 special use permits for fish and subsistence camps and outfitter/guide activities. The potential for increase in permit applications is moderate.

(12) Land Status: There are no non-National Forest System lands within the roadless area; however, most of the roadless area is encumbered.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Local residents appear to favor a primitive or semi-primitive designation for the area. They prefer that it not become a wilderness in order to avoid restrictions and the loss of future management options associated with wilderness designation.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. Upper Situk Roadless Area was not one of these areas. In 2001, HR 2908 proposed managing the northern part of the roadless area as LUD II in an unroaded condition and designating the area south of Russell Fiord as wilderness.

(c) Public Input During Forest Plan Revision and Appeals: The City of Yakutat recommended that the fisheries values and fish habitat protection be of paramount importance in managing the Yakutat Forelands (the Upper Situk Roadless Area is part of the Forelands). The Forelands should be managed for fish, wildlife, subsistence, and visual resources. Small scale and personal use timber harvest should be permitted. The Southeast Alaska Conservation Council and others recommended against road building and logging because of the effects of logging on the educational and recreational values of the area. They stated that the area merited special protection for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. The National Audubon Society recommended that the area be managed for primitive recreation. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated on the Tongass National Forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless area are available.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Department of Fish and Game rated the Upper Situk roadless area as the ninth highest priority for protection in northern Southeast Alaska. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

SEACC recommended the remaining unlogged portions of the Yakutat area, including Roadless Areas 338, 339, and 341, should be protected through a combination of LUD II and wilderness designations as in Alternative 6.

The Yakutat Tlingit Tribe supported "…the present land management scheme." and stated that it did not want to see "…changes in the Wilderness designation…."

The Department of Transportation and Public Facilities said that the depiction of land status along the south shore of Yakutat Bay shows land as developed and as two or more small roadless areas that are no longer part of the Tongass National Forest.

(2) Nearby Roadless and Wilderness Areas and Uses: The Russell Fiord Wilderness forms the northeastern boundary of the Upper Situk Roadless Area. The Yakutat Forelands Roadless Area (#339) lies to the south, across Forest Highway 10. The Brabazon Addition (#338), another roadless area, is located 5 miles to the east of the Russell Fiord Wilderness. These unroaded areas are connected to other unroaded areas in Canada and Alaska, including the Wrangell-Saint Elias National Park and other roadless areas on the Tongass National Forest. These areas are used primarily for recreation (including tourism) and subsistence.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	190	260
Sitka (Pop.8,835)	225	275
Cordova (Pop. 2,454)	215	250
Anchorage (Pop. 260,283)	340	615

Yakutat has twice-daily commercial air service, both north- and southbound. There is no ferry service to Yakutat. The closest Alaska Marine Highway terminals are Hoonah to the southeast and Cordova to the west.

(4) Relative Contribution to the National Wilderness Preservation System: The Upper Situk Roadless Area is located on the mainland, east of Yakutat. The area adjoins State and private lands to the southwest, Forest Highway 10 on National Forest System lands to the south, and the Russell Fiord Wilderness to the west. The northwestern boundary is Yakutat Bay. Approximately half the roadless area is relatively flat. Elevations in this area generally range from sea level to approximately 200 feet. The highest point is about 1,000 foot above sea level. The terrain is characteristic of formerly glaciated topography, glacial outwash plains with lateral and terminal moraines, separated by low, flat areas with numerous streams and rivers, as well as large marshes and muskegs. There are some areas, such as around Pike Lakes, that were unglaciated in the last glacial period. These remnant areas show the characteristics of an old-aged landform with highly developed soil profiles. The roadless area includes several islands in Yakutat Bay.

Most of the area appears unmodified. Modifications include cabins and camps (which are widely scattered and are fairly unobtrusive) and all-terrain vehicle (ATV) trails. The area has high natural integrity and apparent naturalness. The opportunity for solitude is high and moderate for primitive recreation within the roadless area.

The Upper Situk Roadless Area has unique scenic qualities; approximately 61 percent of the area is considered distinctive from a scenery standpoint. The Pikes Lake area is considered distinctive because of its older geologic age in an area of recent glaciation. The lakes also include a unique strain of pike.

The roadless area includes about 2,267 acres of high-volume, old-growth forest. Of these acres, approximately 1,070 are mapped as high-volume, coarse-canopy old growth.

Approximately 73 percent of the Upper Situk Roadless Area is classified as being in the Yakutat Forelands Biogeographic Province and makes up about 4 percent of the province. It is one of two roadless areas that make up about 82 percent of the province. About 2 percent of the Yakutat Forelands Province is in designated wilderness, and about 39 percent is in designated LUD II. The remaining 27 percent of the Upper Situk Roadless Area is located in the Yakutat/Glacier Bay Uplands Biogeographic Province and makes up about 1 percent of that province. It is one of three roadless areas that collectively make up about 62 percent of the province. About 37 percent of the Yakutat/Glacier Bay Uplands Province is in designated wilderness.

The Upper Situk Roadless Area lies completely within the Northern Gulf Forelands Ecological Section. This roadless area represents 5 percent of the entire ecological section, which is well represented by non-development LUDs (72 percent, including 33 percent in LUD II) and an additional 9 percent in wilderness.

The Upper Situk Roadless Area lies completely within the Yakutat-Lituya Forelands Ecological Subsection. This roadless area represents 5 percent of the entire ecological subsection, which is well represented by LUD II and other non-development LUDs (33 and 39 percent, respectively) and an additional 9 percent in wilderness.

The Upper Situk Roadless Area was rated 19 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 70th from the highest (along with 13 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is strong local support for managing the roadless area in an unroaded condition. There is some national support for designating the southern portion of the roadless area as wilderness and for managing the remainder in an unroaded condition. Designation as wilderness would create an addition to the Russell Fiord Wilderness that would abut developed areas and include areas of ongoing high recreation and special uses. The Pikes Lake area would be included in wilderness. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low to moderate.

V. Environmental Consequences

The Upper Situk Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 is implemented. Approximately 81 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 19 percent of the roadless area. The land in the development LUDs includes an estimated 1,236 acres that are suitable for timber production (12 percent of the suitable acres on the Yakutat Ranger District). Approximately 333 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 7,627 acres of undiscovered locatable mineral resources. All of these acres are considered to have low potential for development. The very heavy recreation and special use program would continue. The values associated with the natural settings of the roadless area, including the scenic, geologic, commercial recreational, and ecologic values, are protected by the Forest Plan. The natural setting values associated with the timber production lands could be affected by related activities.

Under Alternative 6, all of the Old-growth Habitat, Semi-remote Recreation, Scenic Viewshed, Modified Landscape, and Timber Production LUDs would be converted to Recommended LUD II and Recommended Wilderness LUD. No timber harvest would be allowed in the roadless area. Some ongoing recreational use, special uses, and mineral management could continue in the Recommended LUD II area and could be restricted in the Recommended Wilderness area. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic, geologic, commercial recreational, and ecologic values, would be provided long-term protection if designated LUD II or wilderness.

Under Alternatives 7, a 2,543-acre portion of the roadless area in Timber Production LUDs would be converted to Recommended Wilderness LUD. The ongoing recreational use, special uses, and mineral management could be restricted and no timber harvest allowed in the Recommended Wilderness LUD. The total area suitable for timber production would be reduced to 313 acres. Mineral prospecting would be allowed in the Recommended Wilderness

LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the timber production LUD portion of the roadless area would be provided long-term protection if designated wilderness.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed. The ongoing recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic, geologic, commercial recreational, and ecologic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 341 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness						2,543	2,543	18,411
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	10,534	10,534	10,534	10,534	10,534		10,534	
Semi-remote Recreation	4,328	4,328	4,328	4,328	4,328		4,328	
Recommended LUD II						15,868		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	214	214	214	214	214		214	
Modified Landscape	57	57	57	57	57		57	
Timber production	3,279	3,279	3,279	3,279	3,279		735	
TOTAL	**18,411**	**18,411**	**18,411**	**18,411**	**18,411**	**18,411**	**18,411**	**18,411**
Suitable Timber Lands	1,236	1,236	1,236	1,236	1,236	**0**	313	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Neka Mountain (342)

ACRES (NFS): 53,019

BIOGEOGRAPHIC PROVINCE: East Chichagof Island

ECOLOGICAL SECTION: Northeast Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 21

I. Overview and Description

(1) Location and Access: The area is located on north Chichagof Island. Non-National Forest System lands border the area to the east. The Land Use Designation (LUD) II portion of the Chichagof Roadless Area (#311) partially borders the area to the west and north. The remainder of the west border is formed by an area of forest roads and timber harvest units that extends along the Neka River. Icy Strait forms the remainder of the north border. Neka Bay borders the area to the south. The city of Hoonah is located about 8 miles to the east. The city of Juneau, the closest larger community, is located approximately 45 air miles east of the area.

The area may be directly accessed by boat or floatplane on the saltwater along its north and south shores. There are no places suitable for landing wheeled airplanes. The forest roads that border the area to the west provide access to the edge of the area. Roads located in the area of non-National Forest System lands that border the area to the east also provide access to the edge of the area. Access into the interior is by foot or helicopter.

(2) History: At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout Chichagof Island. Goldschmidt and Haas (1946) indicated that the Neka Mountain Roadless Area was located within Hoonah Territory. They noted that berrying and salmon fishing occurred along the north shore of Neka Bay within this roadless area. They also identified a smokehouse or cabin in the area.

The general area was surveyed by Captain Vancouver in 1794, who found a native burial box just south of Point Adolphus, just north of this roadless area. He also explored and named Port Frederick located east of the area.

(3) Geography and Topography: Most of this area is mountainous with flatter areas primarily around the estuaries and tidal flats. This roadless area is typical of recently glaciated terrain with rugged mountains dissected by steep-sided, U-shaped valleys and stream courses. Major streams flowing through the area include Chicken, Humpback, and Gallagher Creeks. Saltwater bays and estuaries border the area to the north and south. Elevations range from sea level to 2,972 feet at the highest point, which is Neka Mountain located in the southeast corner of the area. Peaks exceeding 2,000 feet in elevation are scattered throughout the area.

The area includes 13 miles of shoreline on saltwater. This includes five small islands totaling 10 acres. The area also includes 4,374 acres of alpine tundra and 594 acres of rock.

(4) Ecosystem:

(a) Classification: Biogeographic Province. This area is located within the East Chichagof Island Biogeographic Province. This province has a dryer and colder climate than the outer coast of Chichagof Island and the winter snow pack is generally greater. Chichagof Island is deeply dissected into three peninsulas that may be functioning biologically more like separate islands. Vegetation in this province represents a modal condition similar to Admiralty Island Province.

Ecological Section/Subsection. The Neka Mountain Roadless Area is contained entirely within the Northeast Chichagof Fjordlands Ecological Section (M247C). This area is represented by one ecological subsection (see table below). The Point Adolphus Carbonates Ecological Subsection contains bedrock consisting mostly of sedimentary rocks, particularly marble and limestone, with smaller portions of volcanic rocks. The northern side of this ecological subsection continues to uplift due to recent glacial retreat and local tectonics. As a result, the coastal area is lined with beachfront forests and extensive estuary tidal meadows – a rare feature in Southeast Alaska. This area has less than 10 percent alpine land cover and is dominated by productive hemlock and hemlock-spruce forests. In addition, wetlands are common and comprise almost one third of the landscape (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Northeast Chichagof Fjordlands	Point Adolphus Carbonates	100%

(b) Soils: Soil development in the Neka Mountain Roadless Area is influenced by high levels of rainfall, cool summer temperatures, a short growing season, and moderately-low soil temperatures. Under such conditions, organic matter decomposes slowly and tends to accumulate in areas where it is being produced or deposited. Because of the high rainfall, the available nutrients can be leached rapidly and exposed mineral soils are subject to erosion.

In general, due to the rapid loss of material by erosion and efficient rainwater runoff, shallow soils with good drainage tend to develop on steeper slopes. Deep, well-drained soils commonly occur on gentler slopes where transported soil materials have collected.

Deep organic soils (muskegs) tend to develop where drainage is poor. This situation occurs where the soil material fails to provide sufficient internal drainage or where topography prevents external drainage. These areas are generally not well suited for road construction because the soil materials tend to be wet and have low bearing strengths. Drainage improves with increased slope gradient. However, as slopes become oversteepened, soil depths become much shallower. Riparian area soils tend to contain flood-deposited sands and gravels.

(c) Vegetation: Dense western hemlock/Sitka spruce forests dominate the overstory of the Neka Mountain Roadless Area. The understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants. Muskegs are dominated by sphagnum mosses, sedges, and shrubs of the heath family, and are interspersed among low-elevation timber stands where drainage is restricted. Trees are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar. Approximately 2,186 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

Common marine plants in the near-shore waters include brown, red, and green algae, and eelgrass. Tideflats are found at the heads of many of the bays in this general vicinity and are usually associated with stream estuaries. The tideflats generally support sea milkwort, glasswort, and algae. Beach meadows occur between the shore and the forest. Lower beach meadows are composed of beach ryegrass, reed bent grass, hairgrass, fescue grass, beach lovage, goose tongue, and sedges. Upper beach meadow plants include yarrow, bedstraw, starwort, ferns, western columbine, and cow parsnip. Oregon crabapple, alder, devil's club, and blueberry occur along the border of the beach meadow and the forest.

At elevations above 2,000 feet, the plant communities (mapped as 4,374 acres) are generally characterized by low shrubs, grasses, and sedges. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 37,407 acres of forested land in the area, of which approximately 23,090 acres (62 percent) are mapped as productive old growth. Of the productive old growth, 13,003 acres (56 percent) are

mapped as high-volume, old-growth forest. The productive old growth includes about 5,286 acres of high-volume, coarse-canopy old growth. There are 201 acres of second-growth forest where beach harvest has occurred in the past.

(d) Fish Resources: This general area is highly valued for fish production.
The Anadromous Waters Catalogue (ADF&G, 2000) listed Humpback and Homestead Creeks as Class I streams in this roadless area. These streams provide spawning and rearing habitat for pink, coho, and chum salmon. Humpback Creek is known for a large odd-year run of pink salmon and a moderate run of chum salmon. Chum, pink, and coho salmon occur in the area lakes and streams.

(e) Wildlife Resources: Wildlife species in this area include brown bears, Sitka black-tailed deer, and furbearers such as mink, marten, and river otter. Bird and waterfowl rearing and nesting areas are abundant. Some of the most noted nesting areas on Chichagof Island are in the Neka Bay area. Bald eagle habitat, including nesting and roosting trees, is found along the shorelines. Moose are reported to inhabit Chichagof Island, however, black bears, wolves, and mountain goats are not (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This area was allocated to two Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These two LUDs are Old-growth Habitat and Timber Production.

LUD	Acres
Timber Production	23,542
Old-growth Habitat	29,477

Approximately 44 percent of this roadless area was allocated to the Timber Production LUD, which is a development LUD. Most of this roadless area, approximately 56 percent, was allocated to the Old-growth Habitat LUD, which is a non-development LUD.

Recreation use in the area includes hiking, hunting, fishing, camping, picnicking, and viewing scenery and wildlife. There are no developed recreation facilities or trails in this area. Outfitter/guide use was reported at Chicken Creek and Neka Bay in 1999. Twenty-one groups and a total of 100 clients visited one of these two locations, with the majority (94 clients) visiting Chicken Creek. Outfitter/guide use included brown bear hunting, sightseeing, fishing, camping, and picnicking. Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified all of the VCUs that comprise this area as subsistence use areas with a high sensitivity to disturbance.

The Humpback/Gallagher Timber Sale, which is identified as a 21.3 million board feet (MMBF) timber sale, is located on the eastern edge and within the roadless area, and is under contract. The 1996 Record of Decision (ROD) for the Eight Fathom Timber Sale(s) (USDA Forest Service, 1996) proposed additional developments in support of timber management within this roadless area. Some of the areas identified for development in this ROD are, however, located within an area assigned to the Old-growth Habitat LUD in the 1997 Forest Plan and are not planned for implementation. Potential developments cleared in the Eight Fathom ROD located within the Timber Production LUD in this roadless area are currently undergoing additional National Environmental Policy Act (NEPA) with the Otter Lake Environmental Impact Statement (EIS). The Draft EIS was distributed for review and comment in January 2002. The 10-year Action Plan for the Tongass National Forest identifies four future timber sales. These proposed sales are expected to take place between the present and 2006, and range in size from 2.3 to 9.2 MMBF.

(6) Appearance (Apparent Naturalness): The area appears unmodified and in a natural condition except for isolated areas, including three areas where older beach logging has occurred near the shore of Neka Bay. Developments have significantly altered the landscape in the adjacent areas to the east and west. These adjacent areas may detract from the perceived scenic value of the roadless area when it is viewed from some locations within and outside the area.

(7) Surroundings (External Influences): Sealaska and Huna Totem Corporation lands border this area to the east. These private lands have been developed for timber management. A privately-owned log transfer facility is

located at Westport, at the southern end of these private lands. The area is partially bordered to the west by an area of development that extends along the Neka River. This road system extends from the former Eight Fathom Bight logging camp on Port Frederick, ten miles through the Neka River valley to Otter Lake, and then 2 miles along Mud Bay River. The effects of these developments are apparent from locations within the Neka Mountain Roadless Area.

The sights and sounds of motorized boats are also evident from some locations within this area. Icy Strait, which forms part of the area's north border, is part of the Alaska Marine Highway System. Small aircraft overflights for recreation access and service to the various communities and camps are also apparent on occasion. There are several daily, commercial, high-altitude overflights, primarily to the north over Icy Straits.

(8) Attractions and Features of Special Interest: Attractions in this area include the Class I streams and associated fishing opportunities. The area is also considered an important subsistence use area. The VCUs that comprise this area either accounted for 10 to 15 percent or greater than 15 percent of annual average deer harvest by Hoonah residents from 1987 to 1994. A few areas of mostly high vulnerability karst resources have been identified in the vicinity of Neka Mountain and the mountain south of Humpback Creek, as well as in the Chicken Creek drainage. The area contains seven inventoried recreation places, which cover 10,342 acres (19 percent) of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: This area was part of the much larger Chichagof Roadless Area (#311) in 1989. The area is partially bordered to the north by the LUD II portion of the current Chichagof Roadless Area. The area between #311 and #342 in the 1997 Forest Plan Roadless Inventory assumed developments associated with the Eight Fathom ROD would be implemented. These in fact were not developed and additional NEPA is being conducted on that area (Otter Lake EIS). Subsequently, this area has been added back into the roadless inventory. Roadless Area 342 was expanded to the LUD II boundary in #311 as this was a more defined boundary and would better facilitate roadless area analysis.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area appears unmodified and in a natural condition except for isolated areas, including three areas where beach logging has occurred near the shore of Neka Bay. Timber related developments have altered the landscape in the adjacent areas to the east and west. These adjacent areas may affect the roadless area's apparent naturalness and suitability for wilderness when viewed from some locations within and outside the area. However, the overall natural integrity and apparent naturalness is high.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The opportunity for solitude and primitive recreation in the Neka Mountain Roadless Area is high. There are limited human impacts within the area itself. While the visual effects of harvest activities to the east and west of this area may be readily apparent, they are unlikely to affect the opportunity for solitude in the area. They may, however, affect some visitor's perceptions of serenity.

The sights and sounds of motorized boats are also evident from some locations within this area. Icy Strait, which forms part of the area's north border, is part of the Alaska Marine Highway System. Small aircraft overflights for recreation access and service to the various communities and camps are also apparent on occasion. There are several daily, commercial, high-altitude overflights, primarily to the north over Icy Straits. All of these activities provide interruption to solitude. They are, however, transitory and short term in nature.

Recreation use in the area includes hiking, hunting, fishing, camping, picnicking, and viewing scenery and wildlife. There are no developed recreation facilities or trails in the area. Outfitter/guide use was reported at Chicken Creek and Neka Bay in 1999. Twenty-one groups and a total of 100 clients visited one of these two locations. The majority (94 clients) visited Chicken Creek. Outfitter/guide use included brown bear hunting, sightseeing, fishing, camping, and sightseeing.

The area provides primarily semi-primitive and primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	19,218	36%
Semi-Primitive Non-Motorized (SPNM)	26,820	51%
Semi-Primitive Motorized (SPM)	1,097	2%
Roaded Modified (RM)	5,865	11%

The area contains seven inventoried recreation places, which cover 10,342 acres (19 percent) of the roadless area.

ROS Class	Number of Recreation Places*	Total Acres
P	0	0
SPNM	3	7,046
SPM	3	1,097
RM	2	2,199

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The Neka Mountain Roadless Area was part of a much larger roadless area (#311 – Chichagof) in 1989 and was not rated separately. This area was rated for the first time for this updated version of the AMS. Based on this evaluation, the area was given a rating of 21.

(4) Ecologic and Geologic Values: This area, located on north Chichagof Island, is part of a larger unroaded land area that includes the Chichagof Roadless Area #311 and beyond.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed two VCUs partially located in this area (Neka Bay [201] and Mud Bay [193]) as primary sportfish producers. None of the VCUs were listed as primary salmon producers but all were listed as secondary salmon producers (ADF&G 1998).

The Anadromous Waters Catalogue (ADF&G, 2000) listed Humpback Creek and Homestead Creek as Class I streams in this roadless area. These streams provide spawning and rearing habitat for pink, coho, and chum salmon. Humpback Creek is known for a large odd-year run of pink salmon and a moderate run of chum salmon. Chum, pink, and coho salmon occur in the area lakes and streams (ADF&G, 2000).

(b) Wildlife Resources: Wildlife species in this area include brown bears, Sitka black-tailed deer, and furbearers such as mink, marten, and river otter. Bird and waterfowl rearing and nesting areas are abundant. Some of the most noted nesting areas on Chichagof Island are in the Neka Bay area. Bald eagle habitat, including nesting and roosting trees, is found along the shorelines.

Based on harvest data compiled from 1985 to 1995, Neka Bay VCU (201) and Mud Bay VCU (193) were ranked in the first and second 25 percent, respectively, of brown bear harvest areas on the Tongass (ADF&G 1998).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Hoonah Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are areas of mostly high vulnerability karst in this roadless area. These areas are located in the vicinity of Neka Mountain and the mountain south of Humpback Creek and the lower reaches of Chicken Creek. They are underlain by limestone or marble and karst and cave resources are known to have developed there. Only limited inventory has occurred in this area so the extent of karst and cave development is not fully understood. The limestones and marbles found here are commonly the ridge-forming rock types. Extensive karst systems are known from the intensity and numbers of features found described from the limited inventory and air photo interpretations. Paleontological discoveries are likely as well as archaeological finds. Because of the thickness of the limestone and marble in this area, vertical pits and cave systems of record depth are possible. Extensive areas of limestone and marble are exposed from sea level to the ridge tops in these glaciated valleys. The karst systems found here extend from the alpine or higher elevations to the sea, providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. Karst represents about 8,956 acres (17 percent) of the roadless area. Approximately half of the karst is classified as high vulnerability karst. There are no known glaciers or unique geologic features in this area.

(5) Scientific and Educational Values: There are no Research Natural Areas (RNAs) in this roadless area. The city of Juneau, the closest larger community, is located approximately 45 air miles east of the area. Therefore, this area is relatively inaccessible to large numbers of school-age children. The area is more accessible to school-age children residing in the city of Hoonah and other small communities nearby.

(6) Scenic Values: The area appears unmodified and in a natural condition except for isolated areas, including three areas where older beach logging has occurred near the shore of Neka Bay. However, developments have altered the landscape in the adjacent areas to the east and west. These adjacent areas may detract from the perceived scenic value of the roadless area when it is viewed from some locations within and outside the area.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Icy Strait and Port Frederick (Alaska Marine Highway, Tour Ship Routes and Small Boat Routes); Neka Bay (Small Boat Route, Saltwater Use Area, and Boat Anchorage); and Chicken Creek, Humpback Creek, and Neka River (Dispersed Recreation Areas).

This roadless area is inventoried as approximately 18 percent Variety Class A (possessing landscape diversity that is unique for the character type), 66 percent Variety Class B (possessing landscape diversity that is common for the character type) and 16 percent Variety Class C (possessing a low degree of landscape diversity).

The majority of the area (approximately 91 percent) is inventoried as an Existing Visual Condition (EVC) I, which appears untouched by human activity. Approximately 8 percent is inventoried as EVC III, areas in which changes in the landscape are not noticeable to the average visitor unless pointed out. Approximately 1 percent was classified EVC V, where changes in the landscape are obvious to the average person and appear to be major disturbances.

(7) Social, Cultural, and Historical Values: At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout Chichagof Island. Goldschmidt and Haas (1946) indicated that the Neka Mountain Roadless Area was located within Hoonah Territory. They noted that berrying and salmon fishing occurred along the north shore of Neka Bay within this roadless area. They also identified a smokehouse or cabin in the area. The general area was surveyed by Captain Vancouver in 1794, who found a native burial box just south of Point

Adolphus, just north of this roadless area. He also explored and named Port Frederick located east of the area. The city of Juneau, the closest larger community, is located approximately 42 air miles east of the area. The city of Hoonah is located about 8 miles to the east.

This area is an important deer subsistence area for Hoonah residents. The VCUs that comprise this area accounted for 10 to 15 percent or more of annual average deer harvest by Hoonah residents from 1987 to 1994. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified all of the VCUs that comprise this area as subsistence use areas with a high sensitivity to disturbance. One VCU partially located in this area, (Neka Bay [201]), was included among the highest value community use areas and Chicken Creek VCU (196) was included among the second tier of highest value community use areas identified by ADF&G). All the VCUs in this roadless area were listed among those VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The south and part of the north borders of the area are naturally defined by saltwater. The LUD II portion of the Chichagof Roadless Area (#311) partially borders the area to the west and north. The remainder of the west border is formed by an area of development that extends along the Neka River. Developed Native Corporation-owned lands border the area to the east. Forest roads and timber harvest units extend along Gallagher and Humpback Creeks into the east side of the roadless areas. Timber harvest activities have altered the landscape in the adjacent areas to the east and west. The boundary between the area and the Native Corporation lands to the east is a straight line. This line is visible in aerial photographs of the area as a result of the timber harvesting that has occurred on the Native Corporation lands. The visual effects of these adjacent areas somewhat affect the Neka Mountain Roadless Area's suitability for wilderness. The Chicken Creek watershed is adjacent to the LUD II lands on the northwest of the area and could be managed with the LUD II lands.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: There is potential for future recreation use in this area. Outfitter and guide use could increase, especially around Neka Bay.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: There are no identified fishery enhancement projects in this area.

(4) Wildlife Resources: There are no wildlife habitat enhancement projects in this area.

(5) Timber Resources: There are 23,090 acres mapped as productive old growth in this roadless area. Of these acres, 14,256 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 2,066 acres (4 percent) of this roadless area are estimated to be suitable for timber production. Approximately 1,050 of the suitable acres are mapped as high-volume old growth; of these acres, 253 are mapped as high-volume, coarse-canopy old growth.

The Humpback/Gallagher Timber Sale, which is identified as a 21.3 million board feet (MMBF) timber sale, is located on the eastern edge and within the roadless area, and is under contract. The 1996 ROD for the Eight Fathom Timber Sale(s) (USDA Forest Service, 1996) proposed additional developments in support of timber management within this roadless area. Some of the areas identified for development in this ROD are, however, located within an area assigned to the Old-growth Habitat LUD in the 1997 Forest Plan and are not planned for implementation. Potential developments cleared in the Eight Fathom ROD located within the Timber Production LUD in this roadless area are currently undergoing additional NEPA with the Otter Lake EIS. The Draft EIS was distributed for review and comment in January 2002. The 10-year Action Plan for the Tongass National Forest identifies four future timber sales. The four proposed sales are expected to take place between the present and 2006. These four areas range in size from 2.3 to 9.2 MMBF.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: In 1984, the area extending from Idaho Inlet east to the private lands of the Huna Totem and Sealaska Corporations was identified as having a high potential for development of locatable minerals. This broadly defined area encompasses at least part of the Neka Mountain Roadless Area. The USGS Mineral Resource Data website (2001) shows no mineral prospects in this area.

(8) Transportation and Utilities: There are no transportation or utility projects proposed in this area.

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a demand for water in this area. There are no existing or planned hydroelectric or domestic water projects within this roadless area.

(10) Areas of Scientific Interest: A few areas of mostly high vulnerability karst resources have been identified in the vicinity of Neka Mountain and the mountain south of Humpback Creek, as well as in the lower reaches of Chicken Creek. The mapped karst resources encompass approximately 8,956 acres or 17 percent of the roadless area.

(11) Land Use Authorizations: There are no land use authorizations within the roadless area except those associated with outfitters and guides.

(12) Land Status: The area consists entirely of National Forest System lands; however, a part of the roadless area in the south has encumbrances.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The people using this roadless area include those from nearby towns and logging camps. Use from outfitter/guides occurs in the area. Subsistence uses also take place in the area and include hunting, fishing, and gathering.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include what is now the Neka Mountain Roadless Area but did identify a nearby area as the Point Adolphus-Mud Bay Wilderness. Point Adolphus is located in the LUD II area immediately north of the Neka Mountain Roadless Area. Mud Bay is located west of the area. In 2001, HR 2908 identified the area as a proposed LUD II addition.

(c) Public Input During Forest Plan Revisions and Appeals: This area was specifically addressed in public input received during the Forest Plan revision and appeal. The scenic qualities of Chichagof Island in general were mentioned as very important to the tourism, tour boat, and guide service industries. Commenters requested that the coastal areas in the vicinity of Point Adolphus that are not allocated to LUD II should be in non-timber LUDs. These areas were identified as important for fishing and subsistence. Another commenter requested that the portion of the area on Icy Strait be protected from logging because of heavy use by the tourism industry for wildlife viewing, kayaking, camping, and fishing. Timber industry comments stated that the semi-primitive recreation portion of Management Area (MA) C28, which includes the Neka Mountain Roadless Area, was not warranted. The Sierra Club Juneau Group identified MA C28 as an area that should have "far less logging than planned."

Northeast Chichagof Island was identified in the Forest Plan appeal filed on behalf of the Hoonah Indian Association, et al. The appeal identified Northeast Chichagof Island, which may include all or part of the Neka Mountain Roadless Area, as an important customary and traditional Hoonah hunting and fishing area. This appeal stated that this area has already suffered substantial deer habitat loss from past logging and deserves protection.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area was included within the study area of the Eight Fathom Timber Sale(s) EIS (USDA Forest Service, 1996) and a portion of the area is included in the Otter Lake Timber Sale EIS.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Department of Fish and Game rated the Neka Mountain roadless area as the eighth highest priority for protection in northern Southeast Alaska. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence.

The Gustavus Community Association recommended increased protection for Roadless Area 342 because the current Forest Plan failed to adequately protect areas of particular concern to the community of Gustavus, particularly Chicken Creek.

The Hoonah Indian Association emphasized the need for "additional, long-term, protective measures that would prevent any further road building or clear-cut logging above and around Neka Bay including measures that would prevent the proposed Otter Lake Timber Sale".

SEACC recommended the Neka Bay and Neka Mountain areas be designated as LUD II and added to the existing Mud Bay/Point Adolphus LUD II area. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 342 for permanent protection as LUD II

A number of cave/karst experts and other individuals stated that this area contains unexplored karstlands that are almost completely intact and are unique among the larger blocks of karst in Southeast Alaska. They noted that this area should be combined with Roadless Area 343 and protected.

Some individuals supported wilderness protection for this area including Chicken Creek and Gallagher Creek. Some individuals requested protection for Neka Bay and Mountain.

(2) Nearby Roadless and Wilderness Areas and Uses: The Neka Mountain Roadless Area adjoins the Chichagof Roadless Area (311) to the north and west. The Pleasant-Lemesurier-Inian Islands Wilderness is located in Icy Strait north of the Neka Mountain Roadless Area. Glacier Bay National Park is located north across Icy Strait from the area. The West Chichagof-Yakobi Wilderness is located approximately 20 miles west of the area. The Admiralty Island National Monument – Kootznoowoo Wilderness is located approximately 30 miles to the east.

The area is partially bordered to the north and east by the Chichagof Roadless Area (#311). The remainder of the east border of the area is separated from the Chichagof Roadless Area by an area of roads and associated timber harvest that extends along the Neka River. The Neka Bay Roadless Area (#343) is located south across Neka Bay from the area.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	45	70
Sitka (Pop. 8,835)	130	140
Hoonah (Pop. 860)	8	10
Angoon (Pop. 572)	55	70

The nearest stop on the Alaska Marine Highway is Hoonah.

(4) Relative Contribution to the National Wilderness Preservation System: The Neka Mountain Roadless Area is located on the northern coast of Chichagof Island. The northeastern and southern borders follow the shore, the northwestern border follows the LUD II boundary, while the remaining borders follow roaded areas. The roadless area is mountainous with flatter areas primarily around the estuaries and tidal flats. The area includes 13 miles of shoreline on saltwater. This includes 5 small islands totaling 10 acres. The elevation ranges from sea level to nearly 3,000 feet.

Overall, the Neka Mountain Roadless Area is unmodified except for isolated areas, including three areas where beach logging has occurred near the shore of Neka Bay. The roadless area has very high natural integrity and apparent naturalness. Development on adjacent lands, especially on private land to the east, disrupts the natural appearance of the landscape from some viewpoints. The northwestern portion of the area exhibits a higher apparent naturalness. There is a moderate opportunity for solitude and a relatively high opportunity for primitive recreation within the roadless area.

Approximately 18 percent of the area was inventoried as distinctive for the character type from a visual perspective. A few areas of mostly high vulnerability karst has been identified in the vicinity of Neka Mountain and the mountain south of Humpback Creek, as well as in the Chicken Creek drainage.

The roadless area includes about 13,003 acres of high-volume, old-growth forest. Of these acres, approximately 5,286 are mapped as high-volume, coarse-canopy old growth.

The roadless area is classified as being in the East Chichagof Island Biogeographic Province and makes up about 5 percent of the province. It is one of 12 inventoried roadless areas that are found in the province and that collectively make up about 72 percent of the province. Approximately 79 percent of the province is unroaded. The province contains the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness, which make up 6 percent of the province. The province also includes all or portions of three LUD II areas, which make up approximately 25 percent of the province.

The Neka Mountain Roadless Area lies completely within the Northeast Chichagof Fjordlands Ecological Section. The roadless area represents 11 percent of the entire ecological section, which is well represented in non-development LUDs (26 percent) plus a small portion (7 percent) in LUD II.

This roadless area is entirely within the Point Adolphus Carbonates Ecological Subsection. The roadless area represents 45 percent of the entire ecological subsection and is well represented in non-development LUDs (48 percent, including 16 percent LUD II).

The Neka Mountain Roadless Area was rated at 21 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, it is ranked 47th from the highest (along with five other roadless areas) out of the 109 Tongass inventoried roadless areas. If the area adjacent to the LUD II area, which is in the northwest of the roadless area and includes Chicken Creek, is considered separately, the WARS score would remain 21.

There is national and some local support for managing the area in a roadless condition, but there is little support for designating the area as a wilderness. The WARS score for the area is not high relative to other areas of Southeast Alaska, and the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness are in the biogeographic province. The roadless area is relatively small and it is adjacent to developed, private land. These factors indicate that the relative contribution to the National Wilderness System would be low. If the northern portion, including the Chicken Creek drainage that includes high karst and old growth values, were added to the LUD II area it would create a more manageable boundary, based on topographic features. The

northeastern boundary of the LUD II area lacks a well-defined boundary. If this portion of the Neka Mountain Roadless Area and the LUD II area were designated as wilderness their relative contribution to the National Wilderness System would be moderate.

V. Environmental Consequences

The Neka Mountain Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, or 4 were implemented. Approximately 56 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 44 percent of the roadless area. The land in the development LUDs provides an estimated 2,066 acres that are suitable for timber production (10 percent of the suitable acres on the Hoonah Ranger District). Approximately 253 of the suitable acres are classified as high-volume, coarse-canopy old growth. Except in the Chicken Creek area, the values associated with the natural settings of the roadless area could be affected by ongoing developments allowed by the Forest Plan.

Under Alternatives 5 or 7, a 20,814-acre portion of the roadless area currently allocated Old-growth Habitat would be converted to Recommended Wilderness. This area is adjacent to a Congressional designated LUD II area. This would not affect timber sale projects because this area is currently allocated to a non-development LUD. The area suitable for timber production would not change from Alternative 1. The potential for other development, including recreation, mineral, and hydroelectric, would be restricted in the Recommended Wilderness LUD. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the Chicken Creek portion of the roadless area, including the scenic, karst, and old-growth forest values, would be provided long-term protection if designated wilderness.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and development and recreation developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the scenic, karst, and old-growth forest values, would be provided long-term protection if designated LUD II.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed, and the potential for other development, including recreation, mineral, and hydroelectric, would be restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic, karst, and old-growth forest values, would be provided long-term protection if designated wilderness.

Appendix C

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 342 (in acres)								
Land Use Designation	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 4**	**Alt 5**	**Alt 6**	**Alt 7**	**Alt 8**
Recommended Wilderness					20,814		20,814	53,019
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	29,477	29,477	29,477	29,477	8,663		8,663	
Semi-remote Recreation								
Recommended LUD II						53,019		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production	23,542	23,542	23,542	23,542	23,542		23,542	
TOTAL	**53,019**	**53,019**	**53,019**	**53,019**	**53,019**	**53,019**	**53,019**	**53,019**
Suitable Timber Lands	2,066	2,066	2,066	2,066	2,066	0	2,066	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Neka Bay (343)

ACRES (NFS): 7,826

BIOGEOGRAPHIC PROVINCE: East Chichagof Island

ECOLOGICAL SECTION: Northeast Chichagof Fjordlands and Baranof-Chichagof Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 20

I. Overview and Description

(1) Location and Access: This area, located on north Chichagof Island, consists of a peninsula bordered to the north and east by Neka Bay and Port Frederick, respectively. Port Frederick and The Narrows border the area to the south. The peninsula is separated from the main portion of the island by an area developed for timber management that extends northwest from Eight Fathom Bight. The city of Hoonah is located about 10 miles to the east and has regularly scheduled small plane and Alaska Marine Highway ferry service. The city of Juneau, the closest larger community, is located approximately 50 air miles east of the area.

The area may be directly accessed via boat or floatplane on the saltwater along its north and south shores. The forest roads that border the area to the west provide access to the edge of the area. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Villages and sites for seasonal hunting, fishing, and collecting activities were located throughout Chichagof Island. Goldschmidt and Haas (1946) indicated that the Neka Bay Roadless Area was located within Hoonah Territory. The general area was surveyed by Captain Vancouver in 1794. Vancouver explored and named Port Frederick, which partially borders the area to the south and east.

(3) Geography and Topography: The south portion of the peninsula that comprises the majority of this area is characterized by a mountainous ridge with elevations ranging from sea level to 2,970 feet. The north portion of the area is relatively flat. Elevations of the north portion range from sea level to 400 feet. Two inlets, North and South Bight, divide this portion of the area.

The area includes 31 miles of shoreline on saltwater and 7 small islands totaling 52 acres. The area also includes 438 acres of alpine tundra and 7 acres of rock.

(4) Ecosystem:

(a) Classification: Biogeographic Province. This area is located within the East Chichagof Island Biogeographic Province. This province has a dryer and colder climate than the outer coast of Chichagof Island and the winter snow pack is generally greater. Chichagof Island is deeply dissected into three peninsulas that may be functioning biologically more like separate islands. Vegetation in this province represents a modal condition similar to Admiralty Island Province.

Ecological Section/Subsection. The Neka Bay Roadless Area is contained mostly within the Northeast Chichagof Fjordlands Ecological Section (M247C) with portions within the Baranof-Chichagof Fjordlands (M247B). These areas are represented by two ecological subsections (see table below). The Point Adolphus Carbonates Ecological Subsection (97% of the roadless area) contains bedrock consisting mostly of sedimentary rocks, particularly marble and limestone, with smaller portions of volcanic rocks. The northern side of this ecological subsection continues to uplift since recent glacial retreat and local tectonics.

As a result, the coastal area is lined with beachfront forests and extensive estuary tidal meadows – a rare feature in Southeast Alaska. This area has less than 10 percent alpine land cover and is dominated by productive hemlock and hemlock-spruce forests. In addition, wetlands are common and comprise almost one third of the landscape. The North Chichagof Granitics Ecological Subsection (3% of roadless area) is primarily made up of granitics. Severe glacial scouring left a rough surface with steep valleys, fjords, and numerous depression lakes and ponds. Subalpine meadows and bare rock dominate the elevations greater that 1,500 feet and lower elevations are sparsely covered with spruce-hemlock forests where alluvial fans and colluvial cones are present (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Northeast Chichagof Fjordlands	Point Adolphus Carbonates	97%
Baranof-Chichagof Fjordlands	North Chichagof Granitics	3%

(b) Soils: Soil development in the Neka Bay Roadless Area is influenced by high levels of rainfall, cool summer temperatures, a short growing season, and moderately-low soil temperatures. Under such conditions, organic matter decomposes slowly and tends to accumulate in areas where it is being produced or deposited. Because of the high rainfall, the available nutrients can be leached rapidly and exposed mineral soils are subject to erosion.

In general, due to the rapid loss of material by erosion and efficient rainwater runoff, shallow soils with good drainage tend to develop on steeper slopes. Deep, well-drained soils commonly occur on gentler slopes where transported soil materials have collected.

Deep organic soils (muskegs) tend to develop where drainage is poor. This situation occurs where the soil material fails to provide sufficient internal drainage or where topography prevents external drainage. These areas are generally not well suited for road construction because the soil materials tend to be wet and have low bearing strengths. Drainage improves with increased slope gradient; however, as slopes become oversteepened, soil depths become much shallower. Riparian area soils tend to contain flood-deposited sands and gravels.

(c) Vegetation: Dense western hemlock/Sitka spruce forests dominate the overstory of the Neka Bay Roadless Area. The understory is composed of shrubs such as red huckleberry, rusty menziesia, and devil's club. The forest floor is covered with a mat of mosses, liverworts, and plants such as deerheart, bunchberry dogwood, single delight, and skunk cabbage. Streamside riparian vegetation is characterized by salmonberry, devil's club, alder, grasses, ferns, and currants. Muskegs are dominated by sphagnum mosses, sedges, and shrubs of the heath family, and are interspersed among low-elevation timber stands where drainage is restricted. Trees are sparse and consist mainly of stunted hemlock, lodgepole pine, and Alaska-cedar. Approximately 184 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

Common marine plants in the near-shore waters include brown, red, and green algae, and eelgrass. Tideflats are found at the heads of many of the bays in this general vicinity and are usually associated with stream estuaries. The tideflats generally support sea milkwort, glasswort, and algae. Beach meadows like Mud Bay occur between the shore and the forest. Lower beach meadows are composed of beach ryegrass, reed bent grass, hairgrass, fescue grass, beach lovage, goose tongue, and sedges. Upper beach meadow plants include yarrow, bedstraw, starwort, ferns, western columbine, and cow parsnip. Oregon crabapple, alder, devil's club, and blueberry occur along the border of the beach meadow and the forest.

At elevations above 2,000 feet, the plant communities are generally characterized by low shrubs, grasses, and sedges. Subalpine forests and meadows occur at the interface between the forested communities and the alpine tundra.

There are approximately 5,615 acres of forested land in the area, of which approximately 4,128 acres, or 74 percent, are mapped as productive old growth. Of the productive old growth, 2,721 acres or 66 percent are

mapped as high-volume old-growth forest. The productive old growth includes about 588 acres of high-volume, coarse-canopy old growth. There are 300 acres of second-growth forest where beach harvest has occurred in the past.

(d) Fish Resources: Information from the Anadromous Waters Catalogue (ADF&G, 2000) indicates that Portage Creek is the only anadromous fish-bearing stream in this roadless area, providing habitat for pink, coho, and chum salmon.

(e) Wildlife Resources: Wildlife species in the area include brown bears, Sitka black-tailed deer, and furbearers such as mink, marten, and river otter. Bird and waterfowl rearing and nesting areas are abundant. Bald eagle and marbled murrelet habitat is found along the shorelines. Moose are reported to inhabit Chichagof Island; however, black bears, wolves, and mountain goats are not (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to two Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. The two LUDs are Old-growth Habitat and Semi-remote Recreation.

LUD	Acres
Old-growth Habitat	7,822
Semi-remote Recreation	4

All land in the roadless area was allocated to one of two non-development LUDs (Old-growth Habitat and Semi-remote Recreation). Almost 100 percent of this area was allocated to the Old-growth Habitat LUD. Less than 1 percent of the roadless area was allocated to the Semi-remote Recreation LUD. This area is primarily located on small islands associated with the Neka Bay roadless area.

Recreation use in the area includes hiking, hunting, fishing, camping, picnicking, and viewing scenery and wildlife. There are no developed recreation facilities or trails in the area. Outfitter/guide use was reported in the immediate vicinity of the area at Neka Bay and Port Frederick in 1999. Twenty-three groups and a total of 26 clients visited one of these two locations, with the majority (20 clients) visiting the Port Frederick location. Visitors engaged in brown bear hunting at both locations. Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified both of the VCUs that are partially located within this area as subsistence use areas with a high sensitivity to disturbance.

The 1996 Record of Decision for the Eight Fathom Timber Sale(s) (USDA Forest Service, 1996) included the Neka Bay Roadless Area within the boundaries of its project area but did not propose any new harvest activities in the area.

(6) Appearance (Apparent Naturalness): The area appears unmodified and in a natural condition, except in those areas where beach logging has occurred. Logging has occurred along the shoreline in four locations. These locations are adjacent to Frederick Sound, South Bight, and North Bight. They are also visible from boats traveling the adjacent waters or mooring in these areas. North Bight is identified as a visual priority use area (Boat Anchorage) in the 1997 Tongass Land and Resource Management Plan.

(7) Surroundings (External Influences): The developments that border the area to the west are a major external influence. A log transfer facility (LTF) and logging camp (currently inactive) are located at Eight Fathom Bight, immediately west of the Neka Bay Roadless Area.

The Salt Lake Bay roaded area, located south across The Narrows from the Neka Bay Roadless Area, is visible from parts of the area. There is a LTF on the bay and the surrounding lands have been developed. There is also a public recreation cabin at Salt Lake Bay.

The sights and sounds of motorized boats are evident from some locations within the area. Small aircraft overflights for recreation access and service to the various communities and camps in the general vicinity are also apparent on occasion.

(8) Attractions and Features of Special Interest: The area is considered an important subsistence use area. Both VCUs in this area are considered subsistence use areas with a high sensitivity to disturbance. A large swath of mostly high vulnerability karst resources extends southeast from the Neka Bay tidal flats in the northwest through the center of this roadless area. The karst in the southeast portion of the area is classified as low vulnerability. These karst areas encompass 2,157 acres (28 percent) of the roadless area. The area contains five inventoried recreation places, which cover 3,084 acres (39 percent) of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: This area was part of the much larger Chichagof Roadless Area (#311) in 1989. The peninsula that comprises the majority of this roadless area is bordered to the west by developed areas. This developed area separates the Neka Bay Roadless Area from the larger Chichagof Roadless Area that it was formerly a part of and the new Neka Mountain Roadless Area (#342) to the north.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area appears unmodified and in a natural condition, except in those areas where older beach logging has occurred along the shoreline in four locations. These locations are visible from the surrounding waters and from within the area itself. Timber management and associated developments in adjacent areas are also visible from this area. Overall the area has high natural integrity and apparent naturalness. This is primarily because of its location on a peninsula.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The opportunity for solitude in the Neka Bay Roadless Area is moderate. This is primarily because of its relatively small size and the capacity to absorb developments and activities from surrounding areas. There are limited human impacts away from the shorelines.

The sights and sounds of motorized boats are evident from some locations within the area. Small aircraft overflights for recreation access and service to the various communities in the general vicinity are also apparent on occasion. These types of activities provide interruption to solitude, but they are transitory and short term in nature.

Recreation use in the area includes hiking, hunting, fishing, camping, picnicking, and viewing scenery and wildlife. There are no developed recreation facilities or trails in the area. Outfitter/guide use was reported in the immediate vicinity of the area at Neka Bay and Port Frederick in 1999. Twenty-three groups and a total of 26 clients visited one of these two locations, with the majority (20 clients) visiting the Port Frederick location. Visitors engaged in brown bear hunting at both locations.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	5,124	65%
Semi-Primitive Motorized (SPM)	1,874	24%
Roaded Modified (RM)	745	10%

The area contains five inventoried recreation places, which cover 3,084 acres (39 percent) of the roadless area.

ROS Class	Number of Recreation Places*	Total Acres
SPNM	1	1,113
SPM	4	1,874
RM	2	97

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The Neka Bay Roadless Area was part of a much larger roadless area (#311 – Chichagof) in 1989 and was not rated separately. This area was rated for the first time for this updated version of the AMS. Based on this evaluation, the area was given a rating of 20.

(4) Ecologic and Geologic Values: This area, located on north Chichagof Island, is not part of a larger unroaded land area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed one of the two VCUs (Neka Bay [201]) that are partially in the roadless area as a primary sportfish producer. Neither VCU was listed as a primary salmon producer but both are listed as secondary salmon producers (ADF&G, 1998).

Information from the Anadromous Waters Catalogue (ADF&G, 2000) indicates that Portage Creek is the only anadromous fish-bearing stream in this roadless area providing habitat for pink, coho, and chum salmon. This creek receives an estimated annual peak escapement of 18,600 pink salmon and has very good coho smolt capability.

(b) Wildlife Resources: Wildlife species in the area include brown bears, Sitka black-tailed deer, and furbearers such as mink, marten, and river otter. Bird and waterfowl rearing and nesting areas are abundant. Some of the most noted are in the Neka Bay area. Bald eagle habitat, including nesting and roosting trees, is found along the shorelines.

Based on harvest data compiled from 1985 to 1995, both of the VCUs in this area were ranked in the first 25 percent of brown bear harvest areas on the Tongass (ADF&G, 1998).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Hoonah Ranger District.

(d) Karst, Cave, and Other Geologic Resources: A large swath of mostly high vulnerability karst resources extends southeast from the Neka Bay tidal flats in the northwest through the center of this roadless area. The karst in the southeast portion of the area is classified as low vulnerability. These karst areas encompass 2,157 acres (28 percent) of the roadless area. About half of the karst is mapped as high vulnerability karst. There are no known glaciers or unique geologic features in this area.

(5) Scientific and Educational Values: There are no Research Natural Areas (RNAs) in this roadless area. The city of Juneau, the closest larger community, is located approximately 40 air miles east of the area. Therefore,

this area is relatively inaccessible to large numbers of school-age children. The area is more accessible to school-age children residing in the city of Hoonah and other nearby communities.

(6) Scenic Values: The area appears unmodified and in a natural condition, except in those areas where beach logging has occurred. Older beach logging has occurred along the shoreline in four locations. These locations are adjacent to Frederick Sound, South Bight, and North Bight. These locations are visible from boats traveling the adjacent waters or mooring in these areas.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Port Frederick, Neka Bay, The Narrows, and Salt Lake Bay (Small Boat Routes); Neka Bay (Saltwater Use Area); Neka River (Dispersed Recreation Area); and Neka Bay, North Bight, and Salt Lake Bay (Boat Anchorages).

This roadless area is inventoried as approximately 12 percent Variety Class A (possessing landscape diversity that is unique for the character type), 76 percent Variety Class B (possessing landscape diversity that is common for the character type) and 10 percent Variety Class C (possessing a low degree of landscape diversity). Approximately 2 percent of the area was not inventoried for Variety Class type.

The majority of the area (74 percent) was inventoried as an Existing Visual Condition (EVC) I, which appears untouched by human activity. Approximately 15 percent was inventoried as EVC III, areas in which changes in the landscape are not noticeable to the average visitor unless pointed out. Another 3 percent was inventoried as EVC IV, in which changes in the landscape are easily noticed by the average visitor, but resemble natural patterns. Approximately 7 percent was inventoried as EVC V, where changes to the landscape are obvious to the average visitor. Approximately 2 percent of the area was not inventoried for EVC.

(7) Social, Cultural, and Historical Values: At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this area of Chichagof Island. Villages, and sites for seasonal hunting, fishing, and collecting activities, were located throughout Chichagof Island. Goldschmidt and Haas (1946) indicated that the Neka Bay Roadless Area was located within Hoonah Territory. The general area was surveyed by Captain Vancouver in 1794. Vancouver explored and named Port Frederick, which partially borders the area to the south and east. The city of Juneau, the closest larger community, is located approximately 50 air miles east of the area. The city of Hoonah is located about 10 miles to the east.

Recreation use in the area includes hiking, hunting, fishing, camping, picnicking, and viewing scenery and wildlife. There are no developed recreation facilities or trails in the area. Outfitter/guide use was reported in the immediate vicinity of the area at Neka Bay and Port Frederick in 1999. Twenty-three groups and a total of 26 clients visited one of these two locations, with the majority (20 clients) visiting the Port Frederick location. Visitors engaged in brown bear hunting at both locations. Based on harvest data compiled from 1985 to 1995, both of the VCUs in this area were ranked in the first 25 percent of brown bear harvest areas on the Tongass (ADF&G, 1998). It should, however, be noted that only portions of these VCUs are included in the Neka Bay Roadless Area.

This area is an important deer subsistence area for Hoonah residents. The two VCUs that comprise this area accounted for 10 to 15 percent of annual average deer harvest by Hoonah residents from 1987 to 1994. The Tongass Fish and Wildlife Resource Assessment identified both of the VCUs that are partially located within this area as subsistence use areas with a high sensitivity to disturbance. Both of these VCUs were listed among the VCUs with highest community use values (ADF&G, 1998).

The 1996 Record of Decision for the Eight Fathom Timber Sale(s) (USDA Forest Service, 1996) included the Neka Bay Roadless Area within the boundaries of its project area but did not propose any new harvest activities in the area.

(8) Manageability as Wilderness and Boundary Conditions/Changes: The area is bordered to the west by a forest road system and logged areas that extends northwest from Eight Fathom Bight. The remaining parts of the area are bordered by saltwater. Older beach logging has occurred along the shoreline in four locations. These locations are adjacent to Frederick Sound, South Bight, and North Bight. These locations are also visible from boats traveling the adjacent waters or mooring in these areas. Developments in surrounding areas are also visible from this area and may affect its suitability for wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: There is potential for future recreation use in this area. Outfitter and guide use could increase, especially around Neka Bay.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: There are no identified fishery enhancement projects in this area.

(4) Wildlife Resources: There are no identified wildlife enhancement projects in this area.

(5) Timber Resources: There are 4,128 acres mapped as productive old growth and 300 acres mapped as second growth due to harvest in the roadless area. Of these acres, 3,026 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area, none of this roadless area is classified as suitable for timber production.

The 1996 Record of Decision for the Eight Fathom Timber Sale(s) (USDA Forest Service, 1996) included the Neka Bay Roadless Area within the boundaries of its project area but did not propose any new harvest activities in the area.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: The USGS Mineral Resource Data website (2001) shows no mineral prospects in this area.

(8) Transportation and Utilities: There are no transportation or utility projects proposed in this area.

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a demand for water in this area. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: A large swath of mostly high vulnerability karst resources extends southeast from the Neka Bay tidal flats in the northwest through the center of this roadless area. The karst in the southwest portion of the area is classified as low vulnerability. These karst areas encompass 2,157 acres (28 percent) of the roadless area.

(11) Land Use Authorizations: There are no land use authorizations within the roadless area except for ongoing outfitter guide permits.

(12) Land Status: The area consists entirely of National Forest System lands. Parts of the roadless area in the east are encumbered.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The people using this roadless area include those from nearby towns and logging camps. Use from outfitter/guides occurs in the area. Subsistence uses also take place in the area and include hunting, fishing, and gathering.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Neka Bay

Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also proposed that two of the harvested areas within the area be protected as restoration areas.

(c) Public Input During Forest Plan Revisions and Appeals: This area was addressed in public input received during the Forest Plan revision and appeal. The scenic qualities of Chichagof Island in general were mentioned as very important to the tourism, tour boat, and guide service industries. The Sierra Club Juneau Group identified MA C28, which includes the north part of the Neka Bay Roadless Area, as an area that should have "far less logging than planned." Other commenters stated that the shoreline of MA C29, which includes the south part of the area, should be allocated to the Modified Landscape LUD. One commenter requested that timber harvest not be allowed in VCU 202 (Port Frederick). Another requested that VCU 202 be assigned to the Scenic Viewshed LUD.

Parts of the area were also specifically identified in the Forest Plan appeal filed by the Sitka Conservation Society (SCS). The SCS identified Port Frederick as a salt chuck area, which they define as "intertidal bodies of water typically separated from saltwater by a narrow rocky pass." They noted that these areas are rare in southeast Alaska and requested that salt chuck areas be assigned special status to protect their biological resources, with no logging allowed. Northeast Chichagof Island was identified in the Forest Plan appeal filed on behalf of the Hoonah Indian Association et al. This appeal identified Northeast Chichagof Island, which may include all or part of the Neka Bay Roadless Area, as an important customary and traditional Hoonah hunting and fishing area. The appeal stated that this area has already suffered substantial deer habitat loss from past logging and deserves protection.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area was included within the study area of the Eight Fathom Timber Sale(s) EIS (USDA Forest Service, 1996).

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 343 for permanent protection as LUD II. SEACC recommended the Neka Bay and Neka Mountain areas be designated as LUD II and added to the existing Mud Bay/Point Adolphus LUD II area.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence.

The Hoonah Indian Association emphasized the need for "additional, long-term, protective measures that would prevent any further road building or clear-cut logging above and around Neka Bay including measures that would prevent the proposed Otter Lake Timber Sale."

A resident of Hoonah noted that Neka Bay is priceless to the Hoonah residents and to charter customers. It is very popular for recreation, fishing, hunting and plant gathering. Some individuals requested protection for Neka Bay and Mountain.

A number of cave/karst experts and other individuals stated that this area contains less developed karstlands that are representative of the biogeographic province. They noted that the area should be combined with Roadless Area 342 and protected.

(2) Nearby Roadless and Wilderness Areas and Uses: The West Chichagof-Yakobi Wilderness is located approximately 10 miles west of the area. The Admiralty Island National Monument - Kootznoowoo Wilderness is located approximately 26 miles to the east. The Pleasant-Lemesurier-Inian Islands Wilderness and Glacier Bay National Park are located approximately 19 and 24 miles north of the area, respectively.

The Neka Mountain Roadless Area (#342) is located directly across Neka Bay from the area. The Chichagof Roadless Area (#311) is located directly across the roaded and logged area that borders the Neka Bay Roadless Area to the west. The Game Creek Roadless Area (#323) is located east across Port Frederick from the area.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	50	70
Sitka (Pop. 8,835)	130	145
Hoonah (Pop. 860)	10	10
Angoon (Pop. 572)	50	70

The nearest stop on the Alaska Marine Highway is Hoonah.

(4) Relative Contribution to the National Wilderness Preservation System: The Neka Bay Roadless Area is located on Chichagof Island at the southern end of Port Frederick. The borders follow the shore, except for a narrow area connecting the peninsula with the main island. The southern portion of the roadless area is characterized by a mountainous ridge with elevations ranging from sea level to nearly 3,000 feet. The northern portion of the area is relatively flat. Elevations of the northern portion range from sea level to 400 feet. There are two inlets (North and South Bight) in this portion of the roadless area. The roadless area includes 31 miles of shoreline on saltwater and 7 small islands totaling 52 acres.

Overall, the Neka Bay Roadless Area is unmodified, except in those areas where beach logging has occurred. The roadless area has very high natural integrity and apparent naturalness; however, timber harvest activities in adjacent areas are visible from within the roadless area. The older beach logged areas have reforested and no longer appear developed. There is a moderate opportunity for solitude and primitive recreation within the roadless area due to the small size of the roadless area.

Approximately 12 percent of the area was inventoried as distinctive for the character type from a visual perspective. A large swath of mostly high vulnerability karst extends southeast from the Neka Bay tidal flats in the northwest through the center of this roadless area.

The roadless area includes about 2,721 acres of high-volume, old-growth forest. Of these acres, approximately 588 are mapped as high-volume, coarse-canopy old growth.

The Neka Bay Roadless Area lies within the East Chichagof Island Biogeographic Province and makes up less than one percent of the province. It is one of 12 inventoried roadless areas that are found in the province and that make up 72 percent of the province. The province contains the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness, which make up 6 percent of the province. The province also includes all or portions of three LUD II areas, which make up approximately 25 percent of the province.

The Neka Bay Roadless Area lies within two ecological sections; it represents 2 percent of the Northeast Chichagof Fjordlands Ecological Section and less than 0.1 percent of the Baranof-Chichagof Fjordlands Ecological Section. The Northeast Chichagof Fjordlands is well represented in non-development LUDs (33 percent, including 7 percent within LUD II). The Baranof-Chichagof Fjordlands Ecological Section is well represented by existing wilderness and non-development LUDs (28 and 35 percent, respectively) with an additional 13 percent in LUD II.

The majority of this roadless area (97 percent) is within the Point Adolphus Carbonates Ecological Subsection. This portion of the roadless area represents 6 percent of the entire ecological subsection, which is well represented by non-development LUDs (48 percent including 16 percent in LUD II). The remaining 3 percent of this roadless area is within the North Chichagof Granitics Ecological Subsection. This portion of the roadless area represents 0.1 percent of the entire ecological subsection, which is well represented by non-development LUDs (53 percent, including 38 percent in LUD II) with an additional 19 percent in existing wilderness.

The Neka Bay Roadless Area was rated at 20 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, it is ranked 53rd from the highest (along with 16 other roadless areas) out of the 109 Tongass inventoried roadless areas.

There is national and some local support for managing the area in a roadless condition, but there is little support for designating the area as a wilderness. The WARS score for the area is average relative to other areas of Southeast Alaska, and the Pleasant-Lemesurier-Inian Islands Wilderness and a portion of the West Chichagof-Yakobi Wilderness are in the biogeographic province. The roadless area is relatively small and timber harvest activities have significantly altered the landscape in the adjacent area to the west, which is visible from within the roadless area. These factors indicate that the relative contribution to the National Wilderness System would be low.

V. Environmental Consequences

The Neka Bay Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. All of the roadless area would be managed under non-development LUDs. None of the roadless area is suitable for timber production. The values associated with the natural settings of the roadless area are protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. This would not affect timber management because this area is currently allocated to non-development LUDs. Mineral prospecting and development and recreation developments could continue. The values associated with the natural settings of the roadless area, including the scenic and karst values, would be provided long-term protection if designated LUD II.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. This would not affect timber management because this area is currently allocated to non-development LUDs. The potential for other development, including recreation, mineral, and hydroelectric, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic and karst values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 343 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								7,826
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	7,822	7,822	7,822	7,822	7,822		7,822	
Semi-remote Recreation	4	4	4	4	4		4	
Recommended LUD II						7,826		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production								
TOTAL	7,826	7,826	7,826	7,826	7,826	7,826	7,826	7,826
Suitable Timber Lands	0	0	0	0	0	0	0	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Dall Island (501)

ACRES (NFS): 111,245

BIOGEOGRAPHIC PROVINCE: Dall Island and Vicinity

ECOLOGICAL SECTION: Outer Islands Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 23 (21, 23, 24)

I. Overview and Description

(1) Location and Access: The Dall Roadless Area includes most of the western and southern portion of Dall Island, the southeastern part of Long Island, and many smaller islands. Dall Island is the largest island off the west coast of Prince of Wales Island. The southern half of Dall Island is about 1 to 2 miles west of Long Island. The western border and the northern and southern tips of the roadless area are bounded by saltwater; much of the eastern portion of Dall Island and the majority of Long Island are owned by Alaska Native Corporations. These private lands nearly divide the Dall Island portion of the roadless area into three portions. The northern tip of Dall Island is about 15 miles south of Craig and 60 miles west of Ketchikan. Craig has daily air service to and from surrounding communities and charters to remote forest locations. Hollis, about 25 miles northeast of Dall Island, is the closest town served by the Alaska Marine Highway. Dall Island is about 50 miles long from northern to southern tip. Access is to Roadless Area 501 is by boat and/or floatplane. There are several lakes large enough for floatplanes to use but there are no areas suitable for landing wheeled airplanes. Access to upland areas away from water is by foot or helicopter.

(2) History: Dall Island has a long history of use by Alaska Native people. Alaska Native cultures are known to have occupied sites on Dall Island for two to three thousand years prior to European settlement. There are several sea caves along the coast with evidence of ancient human occupancy or use. Because of this history, several traditional use sites have been selected and conveyed to Alaska Native Corporations. In recent history, the bays and harbors on the sheltered east side of the island have served the commercial fishing industry as fish buying stations, canneries, salteries, and anchorages.

(3) Geography and Topography: The area is characterized by rugged mountains, an irregular coast with many bays and inlets, numerous short drainages, and several freshwater lakes. The maximum elevation is 3,200 feet with a significant amount of alpine vegetation above 2,000 feet. The southern part of Long Island is less rugged; the highest point is approximately 1,400 feet. About 2,681 acres are alpine, and 3,539 acres are classified as rock. Freshwater lakes cover approximately 2,639 acres. The Dall Island Roadless Area contains 755 islands and islets (26 of these are greater than 10 acres) located off its coast and within its bays and inlets (totaling 15,592 acres). There are 356 miles of shoreline on saltwater.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The roadless area is classified as being in the Dall Island and Vicinity Biogeographic Province. These islands are subject to strong oceanic influences. Temperatures are moderate year round. The topography is rugged and dissected, with abundant limestone outcrops. Dall Island appears to be a glacial refugia but inventories of plants and animals are limited. There are large colonies of seabirds on Dall Island.

Ecological Section/Subsection. The Dall Island Roadless Area is contained entirely within the Outer Islands Fjordlands Ecological Section (M247H). This area is represented by one ecological subsection (see table below). This ecological subsection consists of a steeply narrow and rugged mountain range. The

elevation is generally less than 1,000 feet, though some peaks reach 2,500 feet. The coastal area has large coves, bays, and harbors that are shaped by storm waves on the western side and glacial scouring on the eastern side. The bedrock is mostly volcanics with smaller portions of carbonates. Well-drained soils support moderate to highly productive hemlock, hemlock-spruce, and mixed conifer forests. The U-shaped valleys are steep, small, and contain glacial till deposits that support forested wetlands (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Outer Islands Fjordlands	Dall-Outside Complex	100%

(b) Soils: The highly organic, low clay content soils often found in this area are generally formed over bedrock. Soil depths are up to 40 inches.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with a large cedar component. Approximately 1,536 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Approximately 2,715 acres of alpine vegetation are mapped for the area.

There are approximately 97,227 acres mapped as forest land of which 64,784 acres or 67 percent are mapped as productive old-growth forest. Of the productive old growth, 33,872 acres or 52 percent are mapped as high-volume old-growth forest. The productive old growth includes about 7,606 acres of high-volume, coarse-canopy old growth. There are also 356 acres of second growth resulting from beach logging in 1960. The extreme exposure to southeast storm winds along Dall Island's west coast has also resulted in numerous patches of windthrow and natural second-growth forest.

(d) Fish Resources: The lakes and streams in this area provide habitat for pink, coho, chum, and sockeye salmon, steelhead trout and Dolly Varden char. The Anadromous Waters Catalogue (ADF&G, 2000) identified several fish-bearing streams in this area, including Manhattan Lake and Creek, Devil Lake and Creek, Little Devil Lake, Welcome Lake, and the Essowah Lakes.

(e) Wildlife Resources: Dall Island has large populations of Sitka black-tailed deer, wolves, black bear, river otter, mink, beaver, and other small land mammals. Sea birds and mammals are prevalent on the outside coast, islands, and rocks. Trumpeter swans, loons, and an occasional puffin can be seen. Brown bears, moose, and mountain goats do not inhabit Dall Island (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to five different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These five LUDs are Modified Landscape, Semi-remote Recreation, Special Interest Area, Wild River, and Old-growth Habitat.

LUD	Acres
Modified Landscape	12,528
Semi-remote Recreation	85,591
Special Interest Area	5,994
Wild River	5,496
Old-growth Habitat	1,636

Modified Landscape is the only development LUD that occurs in the roadless area. The Modified Landscape LUD is located on the northern end of Dall Island and accounts for approximately 11 percent of the roadless area.

The remaining 89 percent of the roadless area is allocated to non-development LUDs (Semi-remote Recreation, Special Interest Area, Wild River, Old-growth Habitat). Approximately 77 percent of the roadless area was allocated to the Semi-remote Recreation LUD. Approximately 5,994 acres in the mountainous regions of the roadless area (eight sites) are allocated to the Special Interest Area LUD to recognize the extensive karst systems

found there. These Special Interest Areas cover approximately 5 percent of the roadless area. The Essowah Lakes and Streams Area was allocated to the Wild River LUD, which accounts for approximately 5 percent of the roadless area. In the northern end of the roadless area, approximately 1 percent of the roadless area was allocated to the Old-growth Habitat LUD.

There has been little active management of the land area. One public recreation cabin is located on the southern part of Dall Island, on the north shore of Essowah Lakes. A few local residents travel to the east side of the island and hike overland to the beaches on the outer coast. No outfitter/guide permits were issued in 2000 for the roadless area. There is some subsistence use but the remote location limits the amount.

There is a proposal being considered to helicopter salvage portions of the beetle killed spruce throughout the roadless area.

(6) Appearance (Apparent Naturalness): The area displays natural characteristics when viewed from key viewpoints and travel routes. This area is essentially unmodified, but private land holdings fragment the roadless area. Intensive timber harvest on private lands on the east side of Dall Island and the northern two-thirds of Long Island affects the apparent naturalness of portions of the adjacent roadless area.

(7) Surroundings (External Influences): The open Pacific Ocean lies to the west and south. Some portions of the roadless area provide views of intensively managed timber stands on private land on the east side of Dall Island and northern two-thirds of Long Island.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, the saltwater bays and inlets and the opportunity to see wildlife, and study the processes which formed this country may all be attractions. The spectacular cliffs with sea caves and the benches on the outer coast are of special interest. There are 17 recreation places in the roadless area, which cover 52,724 acres, or 48 percent of the roadless area. Point Cornwallis along the southern outer coast is one of the most significant view areas on Dall's west coast. The highly developed karst systems in the Special Interest Area LUD are of particular interest since the area is virtually unexplored and shows promise for discovery of significant caves.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: Beach logged areas near Port Brown that are unroaded have been added to the roadless area. Otherwise, the boundaries of the roadless area have not changed since 1989.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The natural integrity is high, except for portions of the roadless area near the blocks of private lands that have been developed. Overall, this area is unmodified, has high natural integrity and apparent naturalness, and is suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is high opportunity for solitude and outstanding opportunity for primitive recreation within this roadless area, with the possible exception of those areas adjacent to the private lands being managed for timber production. In much of the roadless area, people are unlikely to encounter others during their visit. The outer coast provides the opportunity for exceptional solitude in an ocean beach environment. There are outstanding primitive recreation opportunities due to its difficult access, extensive karst development, remoteness from human activities, and minimal social encounters. Primitive recreation opportunities are typically situated around protected saltwater bays and coves for beachcombing and boating, inland lakes for sport fishing, and cross-country hiking through areas of relatively open higher elevation country for viewing scenery and hunting.

The roadless area contains steep, rugged terrain, rising to over 3,000 feet in elevation. The steep nature of portions of the area, its size, and the unpredictable and often extreme weather present a high degree of challenge and the need for woods skills and experience.

There is a public recreation cabin on the north shore of Essowah Lakes. There is a non-system trail that runs from View Cove on the east side of the island (on non-National Forest System land) to Manhattan

Lake near Sea Otter Harbor on the west side of the island. Local residents hike across the island to fish the lake and to visit the open ocean. There are no other developed recreation facilities in the roadless area.

The area provides primarily primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	104,572	94%
Semi-Primitive Non-Motorized (SPNM)	5,811	5%
Roaded Modified (RM)	633	1%

There are 17 recreation places in the roadless area, which cover 52,724 acres, or 48 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	15	50,001
SPNM	1	2,368
RM	2	355

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS (dated 1990) included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Dall Roadless Area was 22 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this reevaluation, the area was given a rating of 23. In addition, each of the three relatively separate portions of the roadless area were rated separately. The southern portion of Dall Island was scored at 24. The northwest portion of Dall Island rated 23, and the central portion of the island rated 21.

(4) Ecologic and Geologic Values: The roadless area is rich in fish, wildlife, and karst resources. Karst and cave formations in the limestone and marbles underlying this roadless area are considered to have high geological value and were therefore designated as a geologic Special Interest Area. The formations may be of national significance because of their development, complexity, the resources they contain, and limited expanse. The high-energy outer coastline characterized by rock cliffs and occasional beaches is a special geologic feature.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCU 639, the northern tip of Dall Island, as a primary salmon producer and all but a small portion of the southern tip of the roadless area on Dall Island as a secondary salmon producer. This roadless area includes no VCUs that were rated among the primary sport fish producers.

The lakes and streams in this area provide habitat for pink, coho, chum, and sockeye salmon, steelhead trout, and Dolly Varden char. The Anadromous Waters Catalogue (ADF&G, 2000) identified several fish-bearing streams in this area, including Manhattan Lake and Creek, Devil Lake and Creek, Little Devil Lake, Welcome Lake, and the Essowah Lakes. Essowah Lakes and Streams are located in the southern part of Dall Island. The system includes five major lakes, several small lakes, and five streams within VCU 659. Fishing opportunities are excellent for cutthroat trout, Dolly Varden, and sockeye, coho, pink, and chum salmon. Essowah was identified by ADF&G as one of the 65 "important" watersheds in Southeast

Alaska for fisheries values. This system contains 13 miles of anadromous fish streams. Bobs Bay, in northern Dall Island, is a primary salmon producer. This system has an estimated annual peak escapement of 39,575 pink salmon (ADF&G, 1998).

Manhattan Lake and Creek provide habitat for sockeye, coho, pink, and chum salmon as well as steelhead. Devil Lake and Creek are inhabited by these four species of salmon plus Dolly Varden char. Coho salmon and Dolly Varden char inhabit Little Devil Lake and Welcome Lake. Streams in the Long Island portion of this roadless area provide habitat for coho and pink salmon.

(b) Wildlife Resources: Dall Island has large populations of Sitka black-tailed deer, wolves, black bear, river otter, mink, beaver, and other small land mammals. Sea birds and mammals are prevalent on the outside coast, islands, and rocks. Harbor seals frequent Essowah Lakes. The Essowah Lakes system is also considered a high-value waterfowl wintering area, particularly for trumpeter swans, and serves as a stopover for migratory birds. Loons are commonly heard, and an occasional puffin can be seen. Brown bears, moose, and mountain goats do not inhabit Dall Island (MacDonald and Cook, 1999).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. As noted above, the Essowah Lakes system is considered a high-value trumpeter swan wintering area. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Craig Ranger District.

(d) Karst, Cave, and Other Geologic Resources: Many of the highest ridges and associated peaks and ridges, i.e., Cone, Bear, Thunder, Twin, Grace, and White, within and adjacent to this roadless area are mainly underlain by limestone and marble. Karst systems have developed into the limestone and marble and were designated as a Special Interest Area. Though a few caves have been inventoried in this area, exploration has been limited. Significant paleontological finds have come from several caves. Additional paleontological discoveries are likely as well as archaeological finds. Extensive karst systems are known for the intensity and numbers of features found here. Because of the thickness of the limestone and marble in this area, vertical pits and cave systems of record depth are possible. Areas of limestone and marble are exposed from sea level to the ridge tops in these glaciated valleys. Subalpine fir can be found on the ridge crests in protected alcoves. The karst systems found here extend from the alpine to the sea providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. These formations are potentially of national significance and represent 15,814 acres, or 14 percent of the roadless area. About one-third of the karst is mapped as high vulnerability. There are no glaciers in this area. The high-energy outer coastline, characterized by rock cliffs and occasional beaches, is a special geologic feature.

(5) Scientific and Educational Values: The high-energy outer coastline, characterized by rock cliffs and occasional beaches, is a special feature. Along this coast, there are several sea caves with evidence of ancient human occupancy or use. Also of interest are the rugged headlands and cliffs that face the ocean, particularly along the southern coast of Dall Island. Karst and cave formations in the limestone underlying this roadless area are of national and international significance because of their development, complexity, the resources they contain, and their level of development. This area is thought to have been ice free during the last glacial episode and is the subject of research on determining the ecology of the outer coast during the last glacial period and the extent and timing of glaciation.

(6) Scenic Values: The Dall Island Roadless Area is part of the Coastal Hills Character Type, which is characterized by rolling to moderately steep terrain, with predominantly rounded summits, and elevations up to 4,000 feet. Dall Island is very representative of this character type, except for the extremely rugged coastline and terrain along portions of the outer coast.

The area displays natural characteristics when viewed from major and minor water travel routes and key viewpoints. Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include the Bobs Bay, Security Cove, Hole-in-the-Wall, Waterfall Bay, Gold Harbor, Port Bazan, Kaigaini Harbor, and Datzkoo Harbor saltwater use areas, and the Essowah Lakes public recreation cabin.

About 59 percent of this area was inventoried as Variety Class B, which possesses landscape characteristics common for the character type. Thirty-four percent of the area was inventoried as Variety Class A, which has a high degree of landscape diversity relative to its character type. The Variety Class A landscapes are generally on the outer coast and include primarily the rugged headlands and rockforms found all along this coast. Approximately 5 percent of the land was listed as Variety Class C, which possesses a low degree of landscape diversity. Approximately two percent of the area was not inventoried for Variety Class type.

Approximately 98 percent of the land in this area was inventoried as Type I Existing Visual Condition (EVC) where the landscape has remained unaltered by human activity. Approximately 1 percent of the area was inventoried as EVC III, in which the average person notices changes in the landscape, but they do not attract significant attention. The private lands adjacent to this roadless area, generally on the eastern half of Dall Island, have been intensively developed, which affects EVC ratings on portions of the roadless area. Approximately two percent of the area was not inventoried for EVC.

(7) Social, Cultural, and Historical Values: Dall Island has a long history of Alaska Native use. Humans are known to have occupied sites on Dall Island for two to three thousand years. There are several sea caves along the coast with evidence of ancient human occupancy or use. Because of this history, several traditional use sites have been selected and conveyed to Alaska Native Corporations. In recent history, the bays and harbors on the sheltered east side of the island have served the commercial fishing industry as fish buying stations, canneries, salteries, and anchorages. No outfitter/guide permits were issued in 2000 in the roadless area. This roadless area supports subsistence use, especially by residents of the Hydaburg area. Only VCU's 637 and 645, a small part of the northern tip and of the eastern shore, were listed among the VCU's with the highest sensitivity to disturbance of subsistence use areas. None of the VCUs in the roadless area are listed among the VCUs with the highest, second, or third most important community fish and wildlife values (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: Where the roadless area is bounded by saltwater, the boundaries are well defined. However, the long boundaries with private lands on Dall Island are not defined by topographic features. Given the extent of these boundaries, there does not appear to be any way to create better-defined boundaries. This detracts from the manageability of the area for wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. There is the potential for some of these tourists to be drawn to fish, hunt, and camp in the roadless area. There is a potential for outfitter/guide permits to increase. There is an opportunity to manage this area for primitive and semi-primitive recreation. There is some opportunity to increase developed recreation facilities with additional cabins and trails. The majority of the high-energy coast is not suitable for boat or floatplane access. Almost all land surrounding good anchorages along the east coast is privately owned. Ownership patterns and very rough topography complicate potential access for recreation facility construction and other activities. The only reasonable way for most visitors to access the outer coast beaches is to hike cross-country from east-side bays and anchorages. The roadless area has excellent potential for development of interesting cross-island trails. There are excellent sites for public recreation cabins in the major bays on the west coast. With careful planning, there may be opportunities to interpret cultural resources on Dall Island. Additional opportunities include beachcombing, hunting, sportfishing, sea kayaking, dispersed camping, viewing scenery, and canoeing/kayaking on Essowah Lakes Wild River. Karst and cave development in the roadless area may provide a unique opportunity to develop destination recreation facilities in association with interpretation and viewing of these features and topography.

In 1996, the Alaska Visitors Association (AVA) proposed the following recreation developments for Dall Island: hut-to-hut hiking for 25 persons/day, ten flight seeing landings, a 3,000-square-foot equipment storage facility, boardwalks, paths, and trails.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resources: No fish habitat enhancement projects are planned at this time.

(4) Wildlife Resources: No wildlife habitat improvement or population enhancement projects are planned.

(5) Timber Resources: There are 64,784 acres mapped as productive old-growth forest in the roadless area. In addition, 356 acres of second growth have resulted from beach logging activities. Of this, approximately 41,934 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 2,547 acres or 2 percent of this roadless area are estimated to be suitable for timber production. Approximately 905 of the suitable acres are mapped as high-volume old growth; of these acres, less than 10 are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless is dependent on the development of a road system and LTFs. The rugged terrain over much of the area limits the opportunity for management of its resources, particularly timber. Dall Island's west coast is exposed to the open ocean. This high-energy coast is not suitable for boat or floatplane access. Alaska Native Corporations have acquired almost all land surrounding good anchorages along the east coast. Ownership patterns and very rough topography complicate potential access for timber cutting and other management activities. The extreme exposure to southeast storm winds along Dall Island's west coast has resulted in numerous patches of windthrow and second-growth timber. These areas can be very thick, and when combined with steep slopes, can be nearly impossible to traverse on foot.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. Spruce bark beetle outbreaks can be common following large windthrow events. An insect and disease survey conducted in 1996 indicated high intensity spruce mortality, resulting from spruce bark beetle activity, near Port Bazan, Gold Harbor, Waterfall Bay, and Little Devils Lake. The cool, damp maritime, climate, however, tends to restrict the spread and buildup of spruce beetle populations.

(7) Minerals: There is some potential for mineral activity. There are several mining claims located on the south and south central part of Dall Island. None of these claims are currently in a development or production mode. The USGS Mineral Resources Data website (2001) shows prospects for gold, silver, copper, and lead in this area.

This area contains 2,283 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). This area is located around McLeod Bay in the southern tip of this roadless area, as an area likely to be developed. In addition, this area contains an estimated 107,617 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 7,294 of these acres are considered to have low potential for development.

(8) Transportation and Utilities: There are no current or planned transportation or utility corridors in the roadless area. There is a short powerline on the northeast corner of Dall Island.

(9) Water Availability and Use: The public recreation cabin on Essowah Lakes is the only facility creating public potable water demand in this area. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: There are several sea caves along the coast with evidence of ancient human occupancy or use. There are also extensive karst deposits. The mapped karst resources encompass approximately 15,814 acres or 14 percent of the roadless area. There are unmodified unique ecosystems that could be studied as part of the Special Interest Area designation.

(11) Land Use Authorizations: There is a special use permit for a short powerline on the northeast corner of Dall Island.

(12) Land Status: Encumbered land accounts for approximately 4 percent of this roadless area. The encumbered land includes a segment in northeast Dall Island and an area just north of the Essowah Lakes Wild and Scenic LUD. Most of the land adjacent to the Dall Island Roadless Area is owned by the Sealaska Regional Corporation or the Klukwan Village Corporation.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives local use for subsistence activities. Local residents travel to Dall Island and hike overland to the west coast beaches for recreation purposes including beachcombing, sport fishing and hunting, and sea kayaking.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Dall Roadless Area. In 2001, HR 2908 proposed managing the roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The Southeast Alaska Conservation Council and others recommended against road building and logging. They stated that the area merited special protection for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. The National Audubon Society, the Petersburg Fish and Game Advisory Board, and others recommended against logging and road building on the west side of Dall Island because it is an outstanding wilderness resource: very remote with craggy headlands, sandy beaches, caves, archaeological sites, and good recreation potential. One commenter suggested that West Dall should be part of an "outer coast wildlife refuge system." The Alaska Forest Association, the Alaska Miners Association, and the AVA recommended that no new wilderness be designated. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber. In 1996, the AVA proposed the following recreation developments for Dall Island: hut-to-hut hiking for 25 persons/day, ten flight seeing landings, a 3,000-square-foot equipment storage facility, boardwalks, paths, and trails.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless area are available.

(f) Public Input Expressed During Supplemental EIS Process: The President of the Hydaburg Cooperative Association spoke "against the wilderness plans for the south end of Prince of Wales Island" during the Craig Hearing and in a letter stressed the importance of Cordova Bay.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 501 for permanent protection as LUD II. SEACC recommended that western Dall Island be designated as LUD II.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

A number of cave/karst experts and other individuals stated that the Dall Island Biogeographic Province contains numerous blocks of highly developed karst, but that relatively little work has been done by cavers

and cave scientists in the Dall Island Roadless Area. Nevertheless, caves discovered within these blocks include nationally significant depths, as well as important cultural, geological, and paleontological components. The commenters indicated that because there has been no timber harvest or road building on Forest Service lands on Dall Island, this area is especially important for protection; combining protection of Forest Serve land with a plan to protect karstlands on private land, would make this a more significant karst reserve.

A Hydaburg resident recommended Dall Island for LUD II, but not wilderness. Some recommended the entire area for LUD II, especially the fiords on the outside. A number of individuals identified Northwest Dall Island as an area in need of protection.

(2) Nearby Roadless and Wilderness Areas and Uses: This roadless area is separated from nearby roadless areas by saltwater. South Prince of Wales Wilderness and Roadless Areas 531 and 504 are several miles to the east, across Cordova Bay. Roadless Area 502 is about 1 mile northeast of Dall Island on Suemez Island and Roadless Area 505 is about 1 mile to the north on Prince of Wales Island. These areas are used for subsistence and recreation.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	220	235
Ketchikan (Pop. 14,070)	60	80
Wrangell (Pop. 2,308)	90	135
Petersburg (Pop. 3,324)	110	140

Hollis, approximately 25 air miles to the northeast on Prince of Wales Island, is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Dall Roadless Area includes most of the western and southern portion of Dall Island, the southeastern part of Long Island, and many smaller islands. The western border and the northern and southern tips of the roadless area are bounded by saltwater; however, much of the eastern portion of Dall Island and the majority of Long Island are owned by Alaska Native Corporations. The area is characterized by rugged mountains, an irregular coast with many bays and inlets, numerous short drainages, and several freshwater lakes. The maximum elevation is 3,200 feet with large alpine areas (above 2,000 feet). The southern part of Long Island is less rugged; the highest point is approximately 1,400 feet.

Overall this area is unmodified and has high natural integrity and very high apparent naturalness; exceptions are the few small areas of beach logging and larger areas of recent development on private lands adjacent to the eastern border on Dall Island and the northern two-thirds of Long Island. The southern portion of Dall Island has very high natural integrity and apparent naturalness. The northwest portion of Dall Island has high natural integrity and very high apparent naturalness. The central part of the island has high natural integrity and moderate apparent naturalness. There is high opportunity for solitude and outstanding opportunity for primitive recreation within this roadless area, with the possible exception of those areas adjacent to the private lands being managed for timber production.

The roadless area has high scenic quality; approximately 34 percent is rated as distinctive for the character type from a visual perspective. Approximately 5,992 acres in the mountainous regions of the roadless area (eight sites) are allocated to the Special Interest Area LUD to recognize the extensive karst systems found there. These Special Interest Areas cover approximately 5 percent of the roadless area. The Essowah Lakes and Streams Area was allocated to the Wild River LUD, which accounts for approximately 5 percent of the roadless area. The high-energy outer coastline, characterized by rock cliffs and occasional beaches, is also a special feature. Along this coast, there are several sea caves with evidence of ancient human occupancy or use.

The roadless area includes about 33,872 acres of high-volume, old-growth forest. Of these acres, approximately 7,606 are mapped as high-volume, coarse-canopy old growth.

The roadless area is classified as being in the Dall Island and Vicinity Biogeographic Province. It is one of two inventoried roadless areas found in the province that collectively make up 58 percent of the province. The province, which is the smallest biogeographic province in Southeast Alaska, does not contain any existing wilderness or LUD II, but all National Forest System lands are unroaded.

The Dall Island Roadless Area lies completely within the Outer Islands Fjordlands Ecological Section and it represents 35 percent of the ecological section. Approximately 10 percent of the Outer Islands Fjordlands Ecological Section is in existing wilderness, 17 percent is in existing LUD II, and 36 percent is protected by other existing non-development LUDs.

All (100 percent) of the roadless area is in the Dall-Outside Complex Ecological Subsection and it represents 38 percent of the entire ecological subsection, 19 percent of which is protected in existing LUD II and 40 percent in other existing non-development LUDs.

The Dall Island Roadless Area is rated at 23 out of a possible 28 points under WARS. As such, its WARS rating is ranked 30th from the highest (along with seven other roadless areas) among the 109 Tongass inventoried roadless areas. When portions of the roadless area are rated separately, the southern area of Dall Island rates 24, the northwestern portion rates 23, and the central portion of the island rates 21.

There is both local and national support for managing the roadless area in an unroaded condition, but there is limited support for designating the area as a wilderness. The WARS score of the area is not exceptionally high, relative to other areas of Southeast Alaska, but there are no other wildernesses in the small Dall Island and Vicinity Biogeographic Province. However, Dall Island Roadless Area is part of the Dall-Outside Complex Ecological Subsection, 19 percent of which is represented in LUD II. Designation as a wilderness would create a wilderness on the Pacific Ocean; however, this aspect would not be unique for the National Wilderness Preservation System. There are several wildernesses and Glacier Bay National Park and Preserve that face the open ocean. They are all larger and less fragmented by developments on private land. The area has high scenic quality and contains unique geologic features, especially the well developed karst systems. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be high.

V. Environmental Consequences

The Dall Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, or 4 is implemented. Approximately 89 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 11 percent; however, the potential for developing timber is limited. The land in the development LUDs provides an estimated 2,547 acres that are suitable for timber production (4 percent of the suitable acres on the Craig Ranger District). Less than 10 of the suitable acres are classified as high-volume, coarse-canopy old growth. An identified mineral activity tract of 2,283 acres, located around McLeod Bay in the southern part of this roadless area, is an area with a high potential for development. There are also more than 107,617 additional acres with low undiscovered mineral potential identified, where prospecting and development could occur. The values associated with the natural settings of the roadless area are mostly protected by the Forest Plan. The exception is the northernmost portion of Dall Island where timber management is allowed by the Forest Plan. The karst, ecologic, and most scenic values are protected by the Forest Plan.

Alternatives 5 or 7 would convert the vast majority of the area to Recommended Wilderness; only the southern part of Long Island would remain as non-wilderness. However, none of the area would be in development LUDs. Timber harvest would not be allowed, and the potential for other development, including recreation, mineral, and hydroelectric, could be restricted. Mineral prospecting and development could continue until areas are designated as wilderness by Congress. Designation would add long-term Congressional protection to the majority of the Dall Island and Vicinity Biogeographic Province, which is not currently represented in wilderness or LUD II. The values associated with the natural settings of the majority of the roadless area, including the scenic, karst and ecologic values, would be provided long-term protection if designated wilderness.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and development and recreation developments could continue, but no timber harvest would be allowed. Designation

would add long-term Congressional protection to the majority of the Dall Island and Vicinity Biogeographic Province, which is not currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area, including the scenic, karst and ecologic values, would be provided long-term protection if designated LUD II.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed, and the potential for other development, including recreation, mineral, and hydroelectric, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation would add long-term Congressional protection to the majority of the Dall Island and Vicinity Biogeographic Province, which is not currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area, including the scenic, karst and ecologic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 501 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness					103,939		103,939	111,245
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area	5,994	5,994	5,994	5,994				
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	1,636	1,636	1,636	1,636				
Semi-remote Recreation	85,591	85,591	85,591	85,591	7,305		7,305	
Recommended LUD II						111,245		
LUD II								
Wild, Scenic, Recreational River	5,496	5,496	5,496	5,496				
Experimental Forest								
Scenic Viewshed								
Modified Landscape	12,528	12,528	12,528	12,528				
Timber production								
TOTAL	**111,245**	**111,245**	**111,245**	**111,245**	**111,245**	**111,245**	**111,245**	**111,245**
Suitable Timber Lands	2,547	2,547	2,547	2,547	**0**	**0**	**0**	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Suemez Island (502)

ACRES (NFS): 24,478

BIOGEOGRAPHIC PROVINCE: Southern Outer Islands and Dall Island and Vicinity Biogeographic Province

ECOLOGICAL SECTION: Outer Islands Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 20

I. Overview and Description

(1) Location and Access: Suemez Island Roadless Area is on the south and west side of Suemez Island. Prince of Wales Island lies to the east across Ulloa Channel, and Dall Island lies to the southeast across Meares Passage. The open Pacific Ocean lies to the south and west. The roadless area is about 15 air miles southwest of Craig and 70 air miles from Ketchikan. Hollis, the closest stop on the Alaska Marine Highway, is approximately 25 air miles east of the roadless area. Access is by boat and/or floatplane. There are no places suitable for landing wheeled aircraft. Roads originating from Port Refugio, a sheltered bay on the east side of the island, provide access to the northern and northeastern boundaries of the roadless area. Access away from this road system and from saltwater is by foot or helicopter.

(2) History: Suemez Island has a long history of use by Alaska Native peoples. Commercial fishing began around 1900. Although there has been extensive timber harvest near the boundaries, there has been no harvest within the roadless area. A parcel of land in the Port Delores area has been conveyed to the State. Port Santa Cruz was the site of the first Catholic Mass conducted in Alaska. There is an annual mass held there each year to commemorate the event.

(3) Geography and Topography: The island is characterized by rugged mountains near the coast and moderate to flat topography in its center. The highest elevation is over 2,100 feet. The topography is the result of a volcanic eruption that occurred at an undetermined time in the past. The boundaries and structure of the flows and the vents are clearly visible. Alpine acres total 175 and 173 acres are rock. There are 59 miles of saltwater shoreline. The shore is very irregular, rugged, and includes several large bays. There are 164 small islands and islets off the coast of Suemez Island that are part of the roadless area (totaling 135 acres); the largest is Ridge Island.

(4) Ecosystem:

(a) Classification: Biogeographic Province. Approximately 82 percent of the roadless area is in the Southern Outer Islands Biogeographic Province. The islands in this province are isolated and are subject to strong oceanic influences, including windstorms. Temperatures are moderate year round. The province is characterized by rolling subdued and localized rugged topography. The islands are relativity rich in endemic vertebrate species. The remaining 18 percent of the roadless area is in the Dall Island and Vicinity Biogeographic Province. This province is subject to strong oceanic influences and moderate temperatures. There is rugged topography and limestone outcrops.

Ecological Section/Subsection. The Suemez Island Roadless Area is contained entirely within the Outer Islands Fjordlands Ecological Section (M247H). This area is represented by one ecological subsection (see table below). This ecological subsection consists of a steeply narrow and rugged mountain range. The elevation is generally less than 1000 feet, though some peaks reach 2,500 feet. The coastal area has large coves, bays, and harbors that are shaped by storm waves on the western side and glacial scouring on the eastern side. The bedrock is mostly volcanics with smaller portions of carbonates. Well-drained soils

support moderate to highly productive hemlock, hemlock-spruce, and mixed conifer forests. The U-shaped valleys are steep, small, and contain glacial till deposits that support forested wetlands (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Outer Islands Fjordlands	Dall-Outside Complex	100%

(b) Soils: The highly organic, low clay content soils often found in this area are generally formed over bedrock and are typically about 40 inches deep.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with large components of cedar. There are 646 acres of muskeg mapped in the area, particularly in the south-central portion of Suemez Roadless Area. However, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 23,272 acres mapped as forest land of which 15,060 acres or 65 percent are mapped as productive old-growth forest. Of the productive old growth, 7,124 acres or 47 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,250 acres of high-volume, coarse-canopy old growth. There are also 23 acres of second growth resulting from beach logging in 1960.

(d) Fish Resource: The Anadromous Waters Catalogue (ADF&G, 2000) identifies several small fish-bearing streams in this roadless area, draining into Port Delores, Port Santa Cruz, Indiada Cove, Aquada Cove, Arena Cove, and along the southeast shore of Suemez Island. These streams provide habitat for coho, pink, and chum salmon.

(e) Wildlife Resources: This area has populations of Sitka black-tailed deer, wolves, and black bear. There are populations of small mammals, such as ermine and river otter, and land birds. Along the coast there are large numbers of sea birds and a few marine mammals. Migrating birds use the area on their travels. Brown bear, moose, and mountain goats do not inhabit Suemez Island (MacDonald and Cook, 1999). Cataloged goshawk nests are located southeast of Port Refugio.

(5) Management Direction and Current Uses: The roadless area was allocated to five different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These five LUDs are Modified Landscape, Timber Production, Special Interest Area, Old-growth Habitat, and Semi-remote Recreation.

LUD	Acres
Timber Production	5,829
Modified Landscape	5,320
Special Interest Area	9,640
Old-growth Habitat	3,627
Semi-remote Recreation	62

The roadless area contains two development LUDs (Modified Landscape and Timber Production) which comprise approximately 46 percent of the area. Approximately 22 percent of the roadless area, primarily around Meares Passage and Port Refugio, was allocated to the Modified Landscape LUD. Approximately 24 percent of the roadless area was allocated to the Timber Production LUD.

Approximately 54 percent of this roadless area was allocated to one of three non-development LUDs (Special Interest Area, Old-growth Habitat, and Semi-remote Recreation). Approximately 39 percent of the roadless area were allocated to the Arena Cove/Cape Felix Special Interest Area LUD for its geologic and cultural values. The Special Interest Area LUD was initially designed to encompass the volcanic vents and various lava, rhyolite, and basalt flows of southwest Suemez Island. Three sections of this roadless area, totaling approximately 15 percent of the roadless area, were allocated to the Old-growth Habitat LUD. These Old-growth Habitat pockets (Port Santa

Cruz, Ulloa Channel area, and east of Lontana Point) are part of the Forest-wide wildlife conservation strategy. Less than 1 percent of the roadless area was allocated to Semi-remote Recreation, which is mostly on associated small islands.

Some dispersed recreation occurs on the island, primarily deer and bear hunting, near the roaded lands in the north. There are no developed recreation facilities on the island. Some subsistence use is occurring in the roadless area, especially in areas that border the roaded and harvested areas. Additional recreation activities on Suemez include beachcombing, dispersed camping, hunting, primarily by residents of Craig, Klawock, and Hydaburg, and off-road-vehicle (ORV) use on the existing road system. Arena Cove is a highly attractive recreation place due to its expansive sandy beach.

(6) Appearance (Apparent Naturalness): Most of the roadless area appears unmodified and is in a natural condition; however, the apparent naturalness is adversely affected by the developments to the north.

(7) Surroundings (External Influences): The timber harvest in the Port Refugio/Port Santa Cruz area reduces the natural appearance of the northern and eastern portions of the roadless area. A timber sale is planned on the State land located in Port Delores. Waterfall Resort, a world class fishing resort, is located across Ulloa Channel on Prince of Wales Island.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, the saltwater bays and inlets and the opportunity to see wildlife and study the processes, which formed this country may all be attractions. The spectacular cliffs with sea caves and volcanic formations on the south and west coast and the long and wide sand beaches rimming Arena Cove were designated as the Arena Cove/Cape Felix Special Interest Area. The lava flows and associated vents inland in the southwest portion of the island still show remnant flow structures. Waterfalls flow from the extensive wetlands atop the flows over the lip of the flow forming grottos behind them. This area is thought to have been ice-free during the last glacial episode and is the subject of research on determining the ecology of the outer coast during the last glacial period and the extent and timing of glaciation. The area contains eight inventoried recreation places, which cover 17,855 acres, or 73 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: Much of the area that was within the 1989 boundaries has been roaded and harvested. This development has nearly divided the roadless area into two parts. The northwestern peninsula is connected to the southern portion of the roadless area by a narrow strip along the beach in Port Santa Cruz. Several smaller areas along the developed boundaries have been excluded from the area between the Draft and Final SEIS to improve the potential manageability of the roadless area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The natural integrity and apparent naturalness of the land within the roadless area is high; however they are affected by the extensive timber harvest activity to the north. The suitability of this area for wilderness classification is lessened because the area's entire northern boundary is delineated by timber harvest activity rather than by well-defined topographic boundaries.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a high opportunity for solitude and primitive recreation in the area, especially in the south portion. Noise from boats in the bays may disturb visitors for short periods. Almost all of the hunting on the island occurs in the developed area. Persons camped within the roadless area are unlikely to encounter other individuals during their stay. There is significant boat and plane traffic to and from Waterfall Resort. They operate approximately 30 charter vessels daily in the summer. They also use Port Refugio as a landing zone for float planes when waters in Ulloa are choppy from a west or northwest wind. Commercial fishing vessels also use waters around Suemez.

The coastal areas contain steep, rugged terrain, rising to over 2,000 feet in elevation. The steep nature of portions of the roadless area and the presence of black bears present a degree of challenge and the need for woods skills and experience. Much of the roadless area is rolling in nature and is less challenging to hikers than the rugged coastal areas.

The area provides primarily semi-primitive and primitive recreation opportunities. The coastal recreation attractions and the remoteness of the Island's outer coast create outstanding prospects for primitive recreation. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	9,339	38%
Semi-Primitive Non-Motorized (SPNM)	10,747	44%
Semi-Primitive Motorized (SPM)	665	3%
Roaded Modified (RM)	3,676	15%

The area contains eight inventoried recreation places, which cover 17,855 acres, or 73 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P1	1	2,874
SPNM	4	10,743
SPM	1	665
RM	5	3,572

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are no developed recreation facilities in the roadless area. Waterfall Resort, a world class fishing resort, is located across Ulloa Channel on Prince of Wales Island.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Suemez Island Roadless Area was 18 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 20.

(4) Ecologic and Geologic Values: The roadless area contains minor amounts of karst. There are no glaciers on Suemez Island. The Arena Cove/Cape Felix Special Interest Area on the south and west coast are of special geologic interest because of the sea caves, cliffs, and volcanic formations.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list any VCUs in this area as primary salmon or sport fish producers. The Anadromous Waters Catalogue identifies several small fish-bearing streams in this roadless area, draining into Port Delores, Port Santa Cruz, Indiada Cove, Aquada Cove, Arena Cove, and along the southeast shore of Suemez Island. These streams provide habitat for coho, pink, and chum salmon (ADF&G, 2000).

(b) Wildlife Resources: This area has populations of Sitka black-tailed deer, wolves and black bear. There are populations of small mammals, such as ermine and river otter, and land birds. Along the coast, there are large numbers of sea birds and a few marine mammals. The high cliffs may provide nest sites for falcons. Brown bear, moose, and mountain goats do not inhabit Suemez Island (MacDonald and Cook, 1999).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Craig Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There is a small area of well developed karst in the middle of Suemez Island and another on the western peninsula of this roadless area. There are 1,865 acres, 8 percent of the area, of mapped karst resources. All of the karst is mapped as medium or low vulnerability. The southwest portion of the roadless area is designated as the Arena Cove/Cape Felix Special Interest Area. It sits atop a complex of volcanic eruptions that has built up over time, the flow features and vents of the last eruption being clearly visible. Basalt flows have filled some valleys, cooling slowly to form large columns; one such feature jets from the sea, forming Cape Felix. Sea caves have formed where the waves batter the coastline. The obsidian flows found here have been important culturally for over 10,000 years. This area is thought to have been ice-free during the last glacial episode and is the subject of research on determining the ecology of the outer coast during the last glacial period and the extent and timing of glaciation. Sea caves and volcanic formations on the south and west coast are of special geologic interest.

(5) Scientific and Educational Values: The high coastal cliffs, including unique volcanic rock formations, on the south and west sides are of special interest. These cliffs have a number of sea caves that add to the interest. There are also karst areas, which may be of interest. There are cultural and archeological sites of interest in this roadless area.

(6) Scenic Values: This area is part of the Coastal Hills Character Type which is characterized by moderately steep landforms, predominantly rounded summits, and flat-floored, U-shaped valleys. This island, with its elevations over 2,000 feet, is representative of this character type.

The natural characteristics of this area are displayed when viewing from the island's southern coast. Once inside the area, the developed areas may be seen if on the north aspect of a hill. The Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Port Refugio and Buccarelli Bay, saltwater use areas; the Waterfall Resort Site and Ulloa Channel north and south of the resort; the Arena Cove/ Cape Felix dispersed recreation site; and the Port Santa Cruz and Port Refugio boat anchorages.

The majority of this area, approximately 72 percent, was inventoried as Variety Class B, which possesses landscape characteristics common for the character type. Approximately 27 percent was rated as Variety Class A, which possesses landscape diversity unique for the character type. The outstanding scenic features are primarily along the southern coast of the island from Arena Cove to the Cape Felix area. This coast exhibits a wide variety of unique scenic features, including long, broad sand beaches, diverse rocky beaches and coves, volcanic rock forms, and unique intertidal rock forms and other beach features.

Approximately 94 percent of the area inventoried as Type I Existing Visual Condition (EVC), where the natural landscape has remained unaltered by human activity. Approximately 5 percent was inventoried as Type V EVC, where changes to the landscape are obvious to the average visitor.

(7) Social, Cultural, and Historical Values: Suemez Island has a long history of use by Alaska Native peoples. Three cultural resource sites in the Arena Cove/Cape Felix Special Interest Area are registered with the Alaska Heritage Resources Survey, and it is thought that there is a high probability of locating a primary source inland. Port Santa Cruz was the site of the first Catholic mass conducted in Alaska. There is an annual mass held there each year to commemorate the event. Commercial fishing began around 1900. A parcel of land in the Port Delores area has been conveyed to the State. The area is important for both commercial and sport fishing. Some dispersed recreation occurs on the island, primarily deer and bear hunting near the roaded lands in the north. There

are no developed recreation facilities on the island. Some subsistence use is occurring in the roadless area, especially in areas that border the roaded and harvested areas. No VCU in this roadless area was listed among the VCUs with the highest community fish and wildlife values, and only VCU 634 was listed in the second most important group. VCUs 633, 634, 635, and 637 make up most of the island and are among those VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998). Other uses on Suemez include dispersed camping and subsistence hunting, fishing, and gathering.

(8) Manageability as Wilderness and Boundary Conditions/Changes: The open Pacific Ocean and large, open saltwater channels make up the southern, western, and southeastern boundaries of the roadless area, making these boundaries easy to manage. The eastern and northern boundary of the roadless area is an irregularly shaped developed area. This boundary would be more difficult to manage because it crosses relatively flat terrain with no identifiable ridgelines or other natural boundary features. There do not appear to be any topographic features that could be used to form a better-defined boundary.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Most of the present recreation use in the vicinity of this island is confined to offshore salmon fishing and crabbing in the bays. Waterfall Resort, a well-known sport fishing resort, is approximately 1 mile across Ulloa Channel, on Prince of Wales Island. If facilities existed, some of these visitors might be drawn to visit the roadless area. The potential exists for developing trails from the road system in Port Refugio to the Arena Cove beaches and the Cape Felix area. There are also opportunities for a public recreation cabin or shelter sites in the Arena Cove area. Other existing/potential recreation activities on Suemez include beachcombing, sea kayaking, and viewing scenery. The proposed West Coast Kayak and Skiff Trail is very close to Suemez and runs through the Ulloa Channel. Also, since this island is relatively close to population centers (Craig, Klawock and Hydaburg) it is more easily accessible by small boats and kayaks. This fact provides for more recreation/tourism potential than roadless areas that are further away.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resources: No fish habitat improvement projects are currently planned.

(4) Wildlife Resources: No wildlife habitat improvement projects are currently planned.

(5) Timber Resources: There are 15,060 acres inventoried as productive old-growth forest in the roadless area and 23 acres of second growth due to beach logging in the past. Of this, approximately 10,542 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 2,904 acres or 12 percent of this roadless area are estimated to be suitable for timber production. Approximately 1,185 of the suitable acres are mapped as high-volume old growth; of these acres, 413 are mapped as high-volume, coarse-canopy old growth. Managing the area for timber would require extending the Port Refugio road system.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. Currently extensive areas are experiencing defoliation from western hemlock canker. Alaska cedar decline is also prevalent in forested wetland areas. Western hemlock dwarf mistletoe can be found in almost all stands.

(7) Minerals: This area contains an estimated 24,298 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 24,259 of these acres are considered to have moderate potential development.

(8) Transportation and Utilities: There are no transportation or utility corridors planned in the roadless area.

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area. Private residences on State land near Port Dolores may create a water demand.

(10) Areas of Scientific Interest: The Arena Cove/Cape Felix Special Interest Area has opportunities to study volcanic complexes, relatively recent lava flows, glacial refugia, coastal cliffs and caves, seabird colonies, coastal forests, fish, and wildlife. The mapped karst resources encompass approximately 1,865 acres or 8 percent of the roadless area.

(11) Land Use Authorizations: There are no major land use authorizations within the roadless area.

(12) Land Status: There are no private inholdings in the roadless area. The State of Alaska owns Land just north of the roadless area around Port Deloris. All other land bordering the roadless area is National Forest System land.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives some local use for subsistence and recreation activity. There has been some interest in building a trail linking Port Refugio to the Arena Cove area. Other recreation uses include beachcombing, sea kayaking, and hunting. There is also a potential for increased ORV use on the road system to the north by hunters.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Suemez Roadless Area. In 2001, HR 2908 proposed managing the roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The Southeast Alaska Conservation Council and others recommended against road building and logging. They stated that the area merited special protection for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments were available for the roadless area.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 502 for permanent protection as LUD II. SEACC recommended the unlogged portion of Suemez Island be designated as LUD II.

The President of the Hydaburg Cooperative Association spoke “against the wilderness plans for the south end of Prince of Wales Island” during the Craig Hearing. At the same hearing, the president of the Craig Community Association stated “they really can’t support any of the alternatives”.

(2) Nearby Roadless and Wilderness Areas and Uses: This roadless area is separated from the Aaron Roadless Area (505) and the Dall Island Roadless Area (501) by Meares Passage. Outer Islands Roadless Area

(503) lies to the north across Bucareli Bay. Kogish Roadless Areas (509), where Pt. Amagura Public Recreation Cabin and a mooring buoy are present, is located approximately 7 miles northwest. Three small wildernesses, the Coronation Island, Warren Island, and Maurelle Islands Wildernesses, lie to the north of the Outer Islands Roadless Area. Maurelle Islands Wilderness, the closest, is approximately 16 miles from this roadless area. The South Prince of Wales Wilderness is approximately 30 miles to the southeast. These areas are primarily used for recreation and subsistence.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	215	230
Ketchikan (Pop. 14,070)	70	130
Wrangell (Pop. 2,308)	90	130
Petersburg (Pop. 3,324)	110	135

Hollis, approximately 25 air miles to the east on Prince of Wales Island, is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: Suemez Roadless Area covers the majority of Suemez Island, on its south and west sides. It is mostly bordered by saltwater, except on the north and northeast, which is state land and harvested areas. The roadless area is characterized by rugged mountains near the coast and moderate to flat topography in the center. The highest elevation is slightly over 2,100 feet. The shore is very irregular, rugged, and includes several large bays, as well as cliffs and caves.

Most of the roadless area has a natural appearance. Large areas of recent harvest near the northern and northeastern boundaries have had an adverse effect on the apparent naturalness of portions of the roadless area. There is a high opportunity for solitude and primitive recreation in the area, especially in the south portion.

The roadless area has moderately high scenic quality; approximately 27 percent is rated as distinctive for the character type from a visual perspective. The southwest portion of the roadless area is designated as the Arena Cove/Cape Felix Special Interest Area. It sits atop a complex of volcanic eruptions that has built up over time, the flow features and vents of the last eruption being clearly visible. Sea caves have formed where the waves batter the coastline.

The roadless area includes about 7,124 acres of high-volume, old-growth forest. Of these acres, approximately 1,250 are mapped as high-volume, coarse-canopy old growth.

The majority of the Sumez Island Roadless Area is classified as being in the Southern Outer Islands and Dall Island and Vicinity Biogeographic Provinces. Approximately 82 percent of the roadless area is in the Southern Outer Island Province and makes up approximately 9 percent of the province. It is one of four inventoried roadless areas found in the province that collectively make up about 67 percent of the province. The vast majority of the province is unroaded. About 17 percent of the Southern Outer Islands Province is in small wildernesses areas (the Coronation Island, Warren Island, and Maurelle Islands Wildernesses) and about 33 percent is in Outer Islands LUD II. The remaining 18 percent of the Sumez Island Roadless Area is in the Dall Island and Vicinity Biogeographic Province and makes up approximately 2 percent province. It is one of two inventoried roadless areas found in the province that collectively make up about 58 percent of the province. There are no wilderness or LUD II areas in the Dall Island and Vicinity Province.

The Suemez Island Roadless Area lies completely within the Outer Islands Fjordlands Ecological Section and represents 8 percent of the ecological section. Approximately 10 percent of the Outer Islands Fjordlands Ecological Section is in existing wilderness, 17 percent is in existing LUD II and 36 percent is protected by other existing non-development LUDs.

All (100 percent) of the roadless area is in the Dall-Outside Complex Ecological Subsection and it represents 8 percent of the entire ecological subsection, 19 percent of which is protected in existing LUD II and 40 percent in other existing non-development LUDs.

The Suemez Roadless Area was rated at 20 out of a possible 28 points under WARS. As such, it is ranked 53rd from the highest (along with 16 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is local and national support for managing the roadless area in an unroaded condition, but there is little support for designating the area as a wilderness. Designation would create a wilderness on the Pacific Ocean; however, this would not be a unique addition to the National Wilderness Preservation System. There are several wildernesses and Glacier Bay National Park and Preserve that face the open ocean. They are all larger and less fragmented by roads and timber harvest. The area has moderately high scenic quality and contains some unique geologic features. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate.

V. Environmental Consequences

The Suemez Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 54 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 46 percent. The land in the development LUDs provides an estimated 2,904 acres that are suitable for timber production (5 percent of the suitable acres on the Craig Ranger District). Approximately 413 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area also contains an estimated 24,298 acres of undiscovered locatable mineral resources where prospecting and development could occur. Most of the acres, 24,259, are considered to have moderate potential for development. The values associated with the natural settings of the roadless area could be affected by the ongoing developments allowed by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and development and recreation developments could continue, but no timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the scenic and ecologic values, would be provided long-term protection if designated LUD II.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber sale projects would not be allowed, and the potential for other development, including recreation, mineral, and hydroelectric, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic and ecologic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 502 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								24,478
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area	9,640	9,640	9,640	9,640	9,640		9,640	
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	3,627	3,627	3,627	3,627	3,627		3,627	
Semi-remote Recreation	62	62	62	62	62		62	
Recommended LUD II						24,478		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	5,320	5,320	5,320	5,320	5,320		5,320	
Timber production	5,829	5,829	5,829	5,829	5,829		5,829	
TOTAL	**24,478**	**24,478**	**24,478**	**24,478**	**24,478**	**24,478**	**24,478**	**24,478**
Suitable Timber Lands	2,904	2,904	2,904	2,904	2,904	0	2,904	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Outer Islands (503)

ACRES (NFS): 99,891

BIOGEOGRAPHIC PROVINCE: Southern Outer Islands

ECOLOGICAL SECTION: Outer Islands Fjordlands, Kuiu-Prince of Wales Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 23 (25)

I. Overview and Description

(1) Location and Access: The Outer Island Roadless Area consists of six major islands and numerous smaller islands off the west coast of Prince of Wales Island. The major islands are: Lulu, Noyes, Baker, San Fernando, St. Ignace, and San Juan Bautista. San Alberto Bay separates the easternmost islands from Prince of Wales Island. Bucareli Bay separates the southernmost islands from Suemez Island. The open Pacific Ocean lies to the west. The Gulf of Esquibel lies to the north. The roadless area is approximately 70 air miles west of Ketchikan, 5 air miles west of Craig, and approximately 25 air miles west of Hollis, the closest stop on the Alaska Marine Highway. There are no places suitable for landing wheeled aircraft in the roadless area. Access is by boat and floatplane. Access to upland areas is by foot or by helicopter.

(2) History: These islands contain important traditional-use sites for the ancient and historic Alaska Native cultures. Traditional-use sites located on the northern and southern ends of Noyes Island and on San Juan Bautista Island have been conveyed to Native Corporations. The area derives its Spanish place names from Spanish explorations that reached this area in the late 18th century (1779 and 1791), although no permanent settlements were established. The area was important in the early-day commercial fishing industry. These islands are located next to the major offshore salmon fishing grounds in Southeast Alaska. Noyes Island was a site for fish canneries and salteries. Private inholdings still exist in Steamboat Bay on northeast Noyes, the site of the Steamboat Bay Cannery. This is a large facility that has been kept in reasonable repair, although not operated as a cannery for some time. All islands served as shelters and anchorages for the offshore fishing fleet. Currently, these bays and anchorages are used by the floating fish-buying barges and the fishing fleet. The outside waters of Baker and Noyes Islands are one of the sport fish guiding areas that makes Southeast Alaska famous**.** The waters around these islands are the heaviest used commercial sport fish guiding areas for some distance. They are used by all sport fishing lodges from Elcap to Waterfall. Daily travel by charter boats to and from the outside coastal fishing grounds of Baker and Noyes is via Port Real Marina, Bucarelli Bay, Portillo Channel, and Arriaga Passage.

(3) Geography and Topography: The six major islands range in size from 5,800 to 33,000 acres. Noyes, Baker, and San Juan Bautista Islands are very rugged with elevations over 2,000 feet. San Fernando and Lulu Islands are characterized by moderate to flat terrain. The coastline of these islands ranges from highly irregular for Baker and Noyes Islands to smooth for San Juan Bautista and Lulu Islands. The west coasts of Noyes and Baker Islands are noted for their high-energy coastlines and their towering cliffs and headlands. Of particular note on Noyes Island is Cape Addington, where it is common to see sea lions hauled out on the rocks. The area includes approximately 576 islands and islets (32 of these are greater than 10 acres) totaling 99,891 acres. There are approximately 285 miles of shoreline on saltwater, 246 acres of lakes, 838 acres of alpine, and 316 acres of rock.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The islands are part of the Southern Outer Island Biogeographic Province. The islands in this province are isolated and are subject to strong oceanic influences. Temperatures are moderate year round. The major islands have gentle rolling topography with localized areas of rugged terrain.

Ecological Section/Subsection. The Outer Islands Roadless Area is contained within the Outer Islands Fjordlands Ecological Section (M247H) and the Kuiu- Prince of Wales Fjordlands Ecological Section (M247F). This area is represented by three ecological subsections (see table below). The Dall-Outside Complex Ecological Subsection (56% of roadless area) consists of a steeply narrow and rugged mountain range. The elevation is generally less than 1,000 feet, though some peaks reach 2,500 feet. The bedrock is mostly volcanics with smaller portions of carbonates. Well-drained soils support moderate to highly productive hemlock, hemlock-spruce, and mixed conifer forests. The U-shaped valleys are steep, small, and contain glacial till deposits that support forested wetlands. The Gulf of Esquibel Till Lowlands Ecological Subsection (40% of roadless area) contains sedimentary and volcanic bedrock covered by mostly glacial till soils. This landscape is mostly flat and rolling, dominated by mixed conifer wetlands on organic soils and productive forests on better-drained hummocks and hillslopes (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Outer Islands Fjordlands	Dall-Outside Complex	56%
Kuiu-Prince of Wales Fjordlands	Gulf of Esquibel Till Lowlands	40%
	Soda Bay Till Lowlands	4%

(b) Soils: Soils are highly organic with a low clay content and are generally formed over bedrock. They are typically about 40 inches deep.

(c) Vegetation: This area is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with a large cedar component. Approximately 708 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 97,211 acres mapped as forest land of which 52,919 acres or 54 percent are mapped as productive old-growth forest. Of the productive old growth, 21,127 acres or 40 percent are mapped as high-volume old-growth forest. The productive old growth includes about 4,253 acres of high-volume, coarse-canopy old growth. There is no second growth in this area.

(d) Fish Resources: The streams in this area provide habitat for anadromous fish including coho, pink, and chum salmon. The Anadromous Waters Catalogue (ADF&G, 2000) shows fish-bearing streams on all of the islands except St. Ignace and Cone Islands. The streams and lakes on the islands also support fresh water fish including trout.

(e) Wildlife Resources: All of the islands have populations of Sitka black-tailed deer, black bear, river otter, beaver and other small land mammals. These islands are relatively rich in endemic vertebrate species and coastal seabird colonies. Sea mammals are prevalent on the outside coast, islands and rocks. Puffins frequent the west coast and offshore rocks of Noyes Island. MacDonald and Cook (1999) indicate that brown bears, moose, and mountain goats are not found on these islands. Other species travel back and forth between these islands frequently.

(5) Management Direction and Current Uses: This roadless area was allocated to four Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These four LUDs include Scenic Viewshed, LUD II, Semi-remote Recreation, and Old-growth Habitat.

LUD	Acres
Scenic Viewshed	3,338
LUD II	74,112
Semi-remote Recreation	21,991
Old-growth Habitat	450

The roadless area contains one development LUD, Scenic Viewshed, which comprises approximately three percent of the roadless area. This LUD is located mostly on San Juan Batista Island.

Approximately 97 percent of the roadless area was allocated to non-development LUDs. Most of this roadless area was designated to LUD II and account for approximately 74 percent of the roadless area. Areas with LUD II designations include Noyes, Lulu, Baker Cone, and St. Ignace Islands and the small adjacent islands near the shores of these islands. Approximately 22 percent of the roadless area was allocated to the Semi-remote Recreation LUD, which is located on San Fernando Island and the nearby small islands. The northwest corner of Bautista Island was allocated to Old-growth Habitat LUD and accounts for less that one percent of the acres in the roadless area.

The commercial fishing fleet is the largest user of the island group. Boats and the floating fish-buying stations anchor in the major bays and anchorages. The inside waters around this island group are excellent for sport salmon and halibut fishing. This attracts both tourists and local residents to the area. These people occasionally go ashore on the islands for shore-based recreation such as beachcombing and dispersed camping. One photography and hiking tour guide operates in the roadless area (3 service days in 2001). Some deer and bear hunting also takes place on the islands. There is one public recreation cabin and mooring buoy on San Fernando Island at Point Amagura. Currently there are planning efforts for the construction of a cross-island trail, public recreation cabin and public boat dock on Baker Island in south Port San Antonio to Little Veta Bay. There is also a non-National Forest System maintained trail leading from Ulitka Bay to Roller Bay on Noyes Island, which is popular with local residents. Planning was initiated for timber sales on Noyes Island but these plans have never been completed. There is some subsistence use, mostly by local residents.

(6) Appearance (Apparent Naturalness): This roadless area possesses outstanding natural integrity. Developments on non-National Forest System lands on Noyes Island, Lulu Island, and San Juan Bautista Island may affect on the apparent naturalness of nearby areas in the roadless area but the remainder the roadless area appears unmodified. There are no developments on National Forest System lands on these islands other than the one cabin at San Fernando. All other development is on native corporation or private inholdings. The Forest Service has never implemented any timber harvest activities in this area.

(7) Surroundings (External Influences): Surrounding lands have only minor affects on the roadless area. There is non-National Forest System land on Noyes Island, Lulu Island, and San Juan Bautista Island, which are primarily owned by Native Village Corporations or the State of Alaska. Developments on these lands may affect nearby portions of the roadless area. Waterfall, a word class fishing resort, is approximately 7 miles to the southeast on Prince of Wales Island. The town of Craig is 6 miles to the east. The Maurelle Islands Wilderness is approximately 2 miles north of Noyes Island.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, the saltwater bays and inlets, and the opportunity to see wildlife and to study the processes, which formed this area may all be attractions. The spectacular cliffs with sea caves and the beaches on the outer coast are of special interest. An historic Native townsite on Baker Island may be developed as an interpretive site. The area contains 18 inventoried recreation places, which cover 32,669 acres, or 33 percent of the roadless area.

(9) Differences between the 1980 and 2003 Roadless Area Boundary: Saint Joseph Island, the northernmost island in the pre-1989 roadless area, is now part of the Maurelle Islands Wilderness. Also, portions of Noyes Island, Lulu Island, and San Juan Bautista Island have been conveyed to Native Corporations and the State and are no longer part of the roadless area.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: This island group possesses high natural integrity and apparent naturalness. The small blocks of non-National Forest System land located on Noyes and Lulu Islands do not have a major affect the apparent naturalness or natural integrity of this or the other islands in the group. However, nearly half the shoreline of San Juan Bautista Island is Native Corporation-owned and development that has occurred or may occur on this, or other private areas, may affect the natural integrity and apparent naturalness in time. This roadless area, with the possible exception of San Juan Bautista Island, is highly suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: With the possible exception of the area adjacent to non-National Forest System lands, there is high to very high opportunity for solitude and primitive recreation within this roadless area. A visitor is unlikely to encounter another person in most of the roadless area. Except via waterways where the heavy boat traffic is constant during fishing season. The outer coasts of Noyes and Baker Islands provide the opportunity for solitude and primitive recreation in an ocean beach environment. The inside protected waters surrounding the islands provide excellent opportunities for sea kayaking recreation. These opportunities extend to the upland areas as well where visitors can participate in hiking, fishing, beach combing, and dispersed camping.

The roadless area contains steep, rugged terrain, rising to over 2,000 feet in elevation. The steep nature of portions of the area, its size, the lack of developed trails or roads, and the presence of black bears presents a high degree of challenge and the need for woods skills and experience. Other portions of the roadless area have relatively gentle topography and are less challenging to cross.

Due to the remoteness of the roadless area, there are outstanding opportunities for primitive recreation experiences, particularly on Noyes and Baker Islands with their various distinct and isolated bays, and the recreation and scenic attractions of the outer coastal areas. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	82,307	82%
Semi-Primitive Non-Motorized (SPNM)	9,812	10%
Semi-Primitive Motorized (SPM)	7,515	8%
Roaded Modified (RM)	108	0%

The area contains 18 inventoried recreation places, which cover 32,669 acres, or 33 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	12	26,184
SPNM	1	2,276
SPM	6	4,209
RM	0	0

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There is a public recreation cabin and mooring buoy near Point Amargura on San Fernando Island. There are no other developed recreation facilities in the roadless area. Currently there are planning efforts for the construction of a cross-island trail, public recreation cabin, and public boat dock on Baker Island in south Port San Antonio to Little Veta Bay. A non-National Forest System maintained trail leading from Ulitka Bay to Roller Bay on Noyes Island is adjacent to the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in

items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Outer Islands Roadless Area Roadless Area was 24 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 23. It was also rated without San Juan Batista Island and received a rating of 25 points.

(4) Ecologic and Geologic Values: The high-energy outer coastlines of Noyes and Baker Islands, which includes cliffs and caves and the karst on Noyes and Baker Islands, are important geologic features. These islands are relatively rich in endemic vertebrate species and coastal seabird colonies.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 568, 569, and 593 (Luhu, Baker, and a few smaller islands) as primary salmon producers but listed no VCUs as primary sport fish producers.

The streams in this area provide habitat for coho, pink, and chum salmon. The Anadromous Waters Catalogue (ADF&G, 2000) shows fish-bearing streams on all of the islands except St. Ignace and Cone Islands. Fish-bearing streams on Noyes Island drain into Roller Bay and Steamboat Bay. On Lulu Island, major streams drain into St. Nicholas Channel and Port Real Marina. West Portillo channel, between Lulu and San Fernando Islands, has an estimated annual peak escapement of 37,400 pink salmon (ADF&G, 1998). There is fishing for chinook salmon on San Fernando Island at Point Amargura (Tongass National Forest Recreation Cabin website, 2001). South Port Real Marina, between Baker and Lulu Islands, receives an estimated peak escapement of 55,000 pink salmon. This area also has good coho production (ADF&G, 1998). Baker Island streams drain into Port Asumcion and Port San Antonio. Lake Fortaleza, on Baker Island, has runs of coho salmon.

(b) Wildlife Resources: All of the islands have populations of Sitka black-tailed deer, black bear, river otter, beaver and other small land mammals. Sea birds and mammals are prevalent on the outside coast, islands and rocks. Puffins frequent the west coast and offshore rocks of Noyes Island. MacDonald and Cook (1999) indicate that brown bears, moose, and mountain goats are not found on these islands. There is an active sea lion study at Cape Addington by ADF&G.

(c) Threatened, Endangered, and Sensitive Species: Two federally listed threatened and endangered species, the humpback whale and Steller sea lion occur in the waters around the area. Steller sea lions use rock haul-outs at Cape Addington on Noyes and Cape Bartolome on Baker Island. Two Forest Service Sensitive Species, Peale's peregrine falcon and the Queen Charlotte goshawk, may be found in the area. Peale's peregrine falcons have been observed in 1981 and again in 1990 along rocky cliffs on the western shores of Noyes as well as the western and eastern shores of Baker Islands. Recent wildlife surveys indicate that the Queen Charlotte goshawk may also occur on Baker Island. Queen Charlotte butterweed, a sensitive species, was found at Lake Fortaleza on Baker Island. In addition, eight other sensitive plant species are known or suspected to occur in the Craig Ranger District.

(d) Karst, Cave, and Other Geologic Resources: Limestones underlay Cape Addington and the northwestern portion of Noyes Island southwest of Steamboat Bay. There are outcrops of limestone that are exposed from Outer Point Baker Island to the top of Mt. Esmeralda at 1,970 feet in elevation. Karst has developed in the limestones found on the uplands of these areas. These areas remain uninventoried and little is know about the karst and cave development there. Extensive sea caves have been carved into the sea cliffs of these Islands, both within the limestone and with in the other rock types found there. Paleontological and cultural deposits in these caves have yielded important scientific discoveries. One extremely large sea cave has even been carved into the granite of Baker Island. Extensive areas of uplifted beach and forelands exist on these islands giving clues into the glacial and/or tectonic past of the outer

coast of Southeast Alaska. This area is thought to have been ice-free during the last glacial episode and is the subject of research on determining the ecology of the outer coast during the last glacial period and the extent and timing of glaciation. The mapped karst resources encompass 5,071 acres or 5 percent of the roadless area. About one-fifth of the karst is mapped as high vulnerability. There are no glaciers or unique geologic features known on these islands.

(5) Scientific and Educational Values: The high-energy outer coastlines of Noyes and Baker Islands and the karst on Noyes and Baker Islands are special features. There are also opportunities to study forests, wildlife, fish, and geologic processes in a pristine setting. An extensive landslide is evident on Noyes in Little Steamboat Bay, (the small bay just northwest of Steamboat on the map). This slide originated at the top of the mountain and appeared to have came down with such speed and force that the debris path actually extends back up the opposite hill slope. There is potential to interpret cultural resources on Baker Island. There is an active sea lion study at Cape Addington by ADF&G.

(6) Scenic Values: The Noyes and Baker Islands portion of this roadless area is part of the Coastal Hills character type which is characterized by moderately steep landforms, predominantly rounded summits (some over 3,000 feet high), and flat-floored U-shaped valleys. These two islands are representative of this character type with their steep slopes (some over 2,000 feet high) and many short U-shaped valleys. The other islands are part of the Kupreanof Lowlands character type, which is characterized by lower and more rolling relief with elevations seldom greater than 1,500 feet. Lulu and San Fernando Islands possess terrain that is generally flatter than the character type's norm. Outer coast has spectacular wave cut cliffs.

The natural characteristics are easily seen from the major and minor water travel routes and from inside the roadless area. Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the roadless area, include: the small boat route from San Cristoval Channel to Ulloa Channel; Port Real Marina and Buccareli Bay and other saltwater use areas; the Craig and Klawock communities; and Steamboat Bay and Pt. Garcia, boat anchorages.

About 55 percent of this area is rated as Variety Class B, possessing landscape characteristics common for the character type. Twelve percent of this area is inventoried as Variety Class A, possessing landscape diversity that is unique for the character type. These landscapes are primarily the outer coastal areas of Noyes and Baker Islands, which include rugged, rocky shorelines with many dramatic steep-walled headlands. Approximately 32 percent of the area was rated as Variety Class C, possessing a very low degree of landscape diversity relative to the character type. These areas include the very flat terrain and relatively featureless shorelines of Lulu and San Fernando Islands.

The vast majority of roadless area, approximately 99 percent, was inventoried as Type I Existing Visual Condition. The natural landscape has remained unaltered by human activity; although some Alaska Native land on the east side of San Juan Bautista has been logged and this may affect the visual condition of nearby portions of the roadless area.

(7) Social, Cultural, and Historical Values: These islands were important traditional-use sites for the ancient and historic Alaska Native cultures. Traditional-use sites on the northern and southern ends of Noyes Island and on San Juan Bautista Island have been conveyed to Native Corporations. The area derives its Spanish place names from Spanish explorers that reached this area in the late 18th century, although no permanent settlements were established. The area has abundant sea caves that are significant culturally. The area was important in the early day commercial fishing industry. These islands are located next to the major offshore salmon fishing grounds in Southeast Alaska. Noyes Island was a site for fish canneries and salteries. All islands served as shelters and anchorages for the offshore fishing fleet. Currently, the commercial fishing fleet is the largest user of the island group. Boats and the floating fish-buying stations anchor in the major bays and anchorages. The inside waters around this island group are excellent for sport salmon and halibut fishing. This attracts both tourists and local residents to the area. These people occasionally go ashore on the islands for shore-based recreation such as beach combing and dispersed camping. One photography and hiking tour guide operates in the roadless area (3 service days in 2000). Some deer and bear hunting also takes place on the islands. There is one public recreation cabin and mooring buoy located on Point Amagura on San Fernando Island. Planning was initiated for timber sales on Noyes Island but these plans have never been completed. All National Forest System land on the island is now designated as LUD II and is not available for timber harvest. The same is true for Lulu, Baker, St. Ignace, Cook, and San Juan Bautista Islands. This roadless area supports subsistence use, mostly by local residents. All

eight VCUs in this roadless area (567, 568, 569, 593, 626, 627, 628, and 629) are listed among those VCUs with the highest sensitivity to disturbance of subsistence use areas. Only VCU 593 (a few very small islands in San Cristoval Channel) is rated among the VCUs with the highest community fish and wildlife values and no VCUs were listed in the second and third most important groups of VCUs (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The Pacific Ocean and other saltwater bodies provide well-defined boundaries for most of the roadless area. The small pockets of non-National Forest System lands on Noyes and Lulu Islands do not have well-defined boundaries but these areas are small and would not have a large effect on manageability. Non-National Forest System lands on San Juan Bautista Island extend along half of the shoreline (the shore facing the town of Craig). The boundary between the roadless area and private lands are not defined by topographic features. The roadless area might be better managed as a wilderness if this island were not included.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. The roadless area is close to Waterfall, a world-class resort that draws tourists interested in fishing. There is the potential for some of these tourists and other visitors to Southeast Alaska to be drawn to fish, hunt, and camp in the roadless area. There is a potential for outfitter/guide permits to increase. There are excellent opportunities to develop canoe/kayak routes through the protected inside waters, interpretation of cultural resources, additional public recreation cabins, and hiking trails from the inner bays to the outer coast beaches. All of the islands are accessible (weather dependant) by boat through protected inside waters from Craig and Klawock, thus providing the opportunity to develop recreation facilities in a unique offshore marine environment.

In 1996, the Alaska Visitors Association proposed the following recreation developments for this roadless area: a small cruise ship shorewalk for 25 persons a day on Steamboat Bay (Noyes Island); day use recreation for 150 persons per day and a day use boat dock for 50 people on Baker Island; and public recreation cabins on San Fernando Island.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resources: The recently completed fish habitat inventory of these islands indicates some potential to improve the quality and availability of salmon spawning habitat on a number of streams. Most of this potential relates to constructing fish passes around natural barriers thus providing fish access to high quality spawning habitat. No fish habitat enhancement projects are currently planned for the roadless area.

(4) Wildlife Resources: There are no plans for wildlife habitat improvement projects within the roadless area.

(5) Timber Resources: There are 52,919 acres inventoried as productive old-growth forest in the roadless area. None of the area is mapped as second growth. Of this, approximately 6,305 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,170 acres or 1 percent of this roadless area are estimated to be suitable for timber production. Approximately 388 of the suitable acres are mapped as high-volume old growth; of these acres, 50 are mapped as high-volume, coarse-canopy old growth.

All of the roadless area, except San Fernando and San Juan Bautista Islands and the small islands near these islands, was designated as LUD II and is not available for timber harvest. San Fernando Island is allocated to Semi-remote Recreation and is not available for timber harvest. Private landowners have developed a road system and LTF site on San Juan Bautista. Access to National Forest System lands that allow timber management will require expansion of the road system on this Island, most likely from the private facilities.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: The mineral potential is low, however, several prospects have been explored on these islands. According to the USGS Mineral Resources Data website (2001), there are copper and nickel prospects on Noyes Island, gold prospects on San Fernando Island, two copper prospects on San Juan Bautista Island, and three prospects on Baker Island for gold, lead, zinc, or copper. This area contains 92,838 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 22,077 of these acres are considered to have high potential for development.

(8) Transportation and Utilities: There are no current or proposed transportation or utility corridors in the roadless area.

(9) Water Availability and Use: The only water demand in this area comes from the public recreation cabin on San Fernando Island. With the exception of Steamboat Bay, there are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The caves on the outer islands may be important areas for cultural resource research. The mapped karst resources encompass approximately 5,071 acres or five percent of the roadless area.

(11) Land Use Authorizations: None.

(12) Land Status: There are two small parcels of State land on Noyes Island that are surrounded by the National Forest System land. Most of the roadless area on San Juan Bautista Island is encumbered. Developments related to Native Corporations are ongoing in this area. The remainder of the roadless area is National Forest System land. The private land bordering this roadless area is generally owned by the State or by Native Corporations.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: There is considerable public concern over future management of the Outer Islands. Many people believe that these islands should be managed for their recreation potential and that logging should be excluded. The Forest Service has received written and verbal comment that the Outer Islands should be designated as a National Recreation Area. There is also public interest in maintaining subsistence resources in the roadless area.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. Noyes, Lulu, Baker Cone, and St. Ignace Islands and the small islands near the shores of these islands were designated as LUD II by the Tongass Timber Reform Act of 1990. In 2001, HR 2908 proposed managing the entire roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The Southeast Alaska Conservation Council and others recommended against road building and logging on San Fernando Island. They stated that the island merited special protection for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated on the Tongass National Forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber. In 1996, the Alaska Visitors Association proposed the following recreation developments for this roadless area: a small cruise ship shorewalk for 25 persons a day on Steamboat Bay (Noyes Island); day use recreation for 150 persons a day and a day use boat dock for 50 people on Baker Island; and public recreation cabins on San Fernando Island.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless

Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless are available. We will be conducting public scoping on the Baker Island Trail EA during January/February. There may be comments to be added in this section at a later point.

(f) Public Input Expressed During Supplemental EIS Process: The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence.

At the Craig Hearing, the President of the Craig Community Association stated "they really can't support any of the alternatives".

An individual commented that it did not make any sense to convert this area from LUD II to wilderness; it should be left as LUD II. One individual wanted San Fernando Island added to permanent protection status.

(2) Nearby Roadless and Wilderness Areas and Uses: This roadless area is separated from other nearby roadless areas and wildernesses by saltwater. The Maurelle Islands Wilderness lies approximately 2 miles north of Noyes Island. Two other small wildernesses, Coronation Island and Warren Island, lie 18 to 25 miles to the northwest. Suemez Roadless Area (502) lies 3 miles to the southeast of Baker Island. The Kogish Roadless Area (509) lies 2 to 3 miles to the northeast of San Fernando Island on Prince of Wales Island. These areas are mainly used for recreation and subsistence.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	195	150
Ketchikan (Pop. 14,070)	70	140
Wrangell (Pop. 2,308)	75	110
Petersburg (Pop. 3,324)	90	115

Hollis, located on Prince of Wales Island, is the closest stop on the Alaska Marine Highway. It is approximately 25 air miles from the easternmost part of the roadless area.

(4) Relative Contribution to the National Wilderness Preservation System: The Outer Island Roadless Area consists of six major islands and numerous smaller islands off the west coast of Prince of Wales Island. The major islands are: Lulu, Noyes, Baker, San Fernando, St. Ignace, and San Juan Bautista. San Alberto Bay separates the easternmost islands from Prince of Wales Island. Bucareli Bay separates the southernmost islands from Suemez Island. The open Pacific Ocean lies to the west. The Gulf of Esquibel lies to the north. The six major islands range in size from 5,800 to 33,000 acres. Noyes, Baker, and San Juan Bautista Islands are very rugged with elevations over 2,000 feet. San Fernando and Lulu Islands are characterized by moderate to flat terrain. The coastline of these islands varies, and ranges from highly irregular for Baker and Noyes Islands to smooth for San Juan Bautista and Lulu Islands. The west coast of Noyes Island is noted for it's high-energy coastline and its towering cliffs and headlands.

The islands are mostly unmodified and natural appearing, except for a few small pockets of logging activity near the boundaries. San Juan Batista Island has larger areas of private land, which influences the natural integrity of the area. The overall area has very high natural integrity and high apparent naturalness. When rated with San Juan Batista separated from the other islands the ratings are increased to outstanding for natural integrity and very high for apparent naturalness. The opportunity for solitude is high and the opportunity for primitive recreation is very high.

The roadless area has high scenic qualities; approximately 12 percent of the landscape is considered distinctive from a scenery standpoint. The high-energy outer coastlines of Noyes and Baker Islands, which includes cliffs and caves and the karst on Noyes and Baker Islands are important geologic features. These islands are relatively rich in endemic vertebrate species and coastal seabird colonies. The area is rich in cultural and historic values.

The roadless area includes about 21,127 acres of high-volume, old-growth forest. Of these acres, approximately 4,253 are mapped as high-volume, coarse-canopy old growth.

The Outer Islands Roadless Area is classified as being in the Southern Outer Islands Biogeographic Province and makes up about 45 percent of the province. It is one of four main inventoried roadless areas found within the province which make up about 59 percent of the province. The province also includes the Maurelle Islands Wilderness, Coronation Island Wilderness, and Warren Island Wilderness which make up about 16 percent of the province, and the Outside Islands LUD II area which makes up an additional 33 percent of the province.

The Outer Islands Roadless Area lies within two ecological sections; it represents 17 percent of the Outer Islands Fjordlands Ecological Section and 4 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section. Both of these ecological sections include moderately sized areas in existing wilderness (10 and 13 percent, respectively) and existing LUD II (17 and 8 percent, respectively), and are well represented by other existing non-development LUDs (36 and 33 percent, respectively).

Just over half (56 percent) of the roadless area is in the Dall-Outside Complex Ecological Subsection; this portion of the roadless area represents 19 percent of the entire ecological subsection, 19 percent of which is protected in existing LUD II and 40 percent in other existing non-development LUDs. Forty percent of the roadless area is in the Gulf of Esquibel Till Lowlands Ecological Subsection; this portion of the roadless area represents 87 percent of the ecological subsection, 12 percent of which is protected in existing wilderness, 40 percent in existing LUD II, and 48 percent by existing non-development LUDs. The remaining 4 percent of the roadless area is in the Soda Bay Till Lowlands Ecological Subsection; this portion of the roadless area represents 3 percent of the entire ecological subsection, none of which is in existing wilderness or LUD II, but 44 percent is protected by other existing non-development LUDs.

The Outer Islands Roadless Area was rated 23 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 30th from the highest (along with 7 other roadless areas) among the 109 Tongass inventoried roadless areas. Another rating was done for the area without San Juan Batista Island, which resulted in a score of 25.

There is both local and national support for managing the roadless area in an unroaded condition and there is limited support for designating portions of the area as a wilderness. Designation would create a wilderness made up of relatively small islands with good cultural/historic values, geologic features, and ongoing research activities. Designation would also provide long-term protection for an area within the Soda Bay Till Lowlands Ecological Subsection; a subsection which does not have any areas within wilderness or LUD II. Most of the area (except San Juan Batista Island) was designated as LUD II by Congress in 1990. Overall, the factors identified here indicate that the relative contribution to the National Wilderness Preservation System for this area would be high.

V. Environmental Consequences

The Outer Islands Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, or 4 is implemented. Approximately 97 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 3 percent of the roadless area. The land in the development LUDs includes an estimated 1,170 acres that are suitable for timber production (2 percent of the suitable acres on the Craig Ranger District). Approximately 50 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains an estimated 92,838 acres of undiscovered locatable mineral resources; 22,077 of these acres are considered to have high potential for development. The research, recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area are protected by the Forest Plan. The exception is the San Juan Batista Island where timber management activities are allowed under the Forest Plan.

Under Alternative 2, all of the existing LUD II area would be converted to Recommended Wilderness LUD. This would not affect timber management because this area is currently allocated to a non-development LUD. The area suitable for timber production would not change from Alternative 1. Ongoing research, recreation, special use, and minerals programs could be restricted in the Recommended Wilderness LUD area. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the existing LUD II areas of the roadless area, including the scenic, geologic, and ecologic values, would be continue to be provided long-term protection if designated wilderness.

Under Alternatives 5 or 7, a 95,953-acre portion of area would be converted to Recommended Wilderness LUD from existing LUD II and Semi-remote Recreation LUDs. This would not affect timber management because this area is currently allocated to a non-development LUD. The area suitable for timber production would not change from Alternative 1. Ongoing research, recreation, special use, and minerals programs could be restricted in the Recommended Wilderness LUD area. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area without San Juan Batista Island, including the scenic, geologic, and ecologic values, would be provided long-term protection if designated wilderness.

Under Alternative 6, all lands not already in existing LUD II would be converted to Recommended LUD II. Ongoing research, recreation, special use, and minerals programs would continue similar to current conditions with little restriction. No timber harvest would be allowed. Designation would provide long-term protection for an area within the Soda Bay Till Lowlands Ecological Subsection; a subsection which does not have any areas within wilderness or LUD II. The values associated with the natural settings of the roadless area, including the scenic, geologic, and ecologic values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed. Ongoing research, recreation, special use, timber sales, and minerals programs could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. Designation would provide long-term protection for an area within the Soda Bay Till Lowlands Ecological Subsection; a subsection which does not have any areas within wilderness or LUD II. The values associated with the natural settings of the roadless area, including the scenic, geologic, and ecologic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 503 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness		74,112			95,953		95,953	99,891
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	450	450	450	450	450		450	
Semi-remote Recreation	21,991	21,991	21,991	21,991	150		150	
Recommended LUD II						25,779		
LUD II	74,112		74,112	74,112		74,112		
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	3,338	3,338	3,338	3,338	3,338		3,338	
Modified Landscape								
Timber production								
TOTAL	**99,891**	**99,891**	**99,891**	**99,891**	**99,891**	**99,891**	**99,891**	**99,891**
Suitable Timber Lands	1,170	1,170	1,170	1,170	1,170	**0**	1,170	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Sukkwan (504)

ACRES (NFS): 49,759

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Outer Islands Fjordlands, Kuiu-Prince of Wales Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 23

I. Overview and Description

(1) Location and Access: The Sukkwan Roadless Area is approximately 50 air miles west of Ketchikan and is 1 mile across the Sukkwan Straight from Hydaburg, an Alaska Native community on the west side of Prince of Wales Island. Hollis, the closest stop on the Alaska Marine Highway, is approximately 30 miles by road from Hydaburg. The roadless area includes Sukkwan Island, Goat Island, Blanket Island, Jackson Island, the McFarland Islands, and many smaller islands in general vicinity. Sukkwan Straight and Hetta Inlet lie to the east. Tlevak Straight lies to the west and south. North Pass is north of Goat Island and South Pass is between Goat and Sukkwan Islands. Access is by floatplane or boat. There are no places suitable for landing wheeled aircraft. Access to upland areas is by foot or helicopter. There are no developed trails in the roadless area.

(2) History: The Tlingit inhabited South Prince of Wales Island and the islands to the southwest until the Haida, who migrated north from the Queen Charlotte Islands, displaced them in the early 1700s. Since then, the islands that make up the roadless area, have been within the principal traditional-use area of the Haida. Because of this historic connection to the area, the Haida Native Corporation selected land in this area, including all of Goat Island and portions of Sukkwan Island. Subsequently, Goat Island and adjacent small islands were obtained by the federal government as part of the Haida Land Exchange. The Haida village of Sukkwan was located on Sukkwan Island until 1916 when it and three other villages were left behind to create the modern community of Hydaburg. Sukkwan Island contains many sites of fish camps and seasonal use dating back hundreds of years and continuing in use today.

(3) Geography and Topography: For the most part, the islands that make up the roadless area have flat to rolling topography, although Sukkwan Island reaches an elevation of 2,160 feet. The larger islands have very irregular coastlines and there are many unnamed small islands. The area includes 504 smaller islands and islets (51 of these are greater than 10 acres) totaling 9,210 acres. There are 240 miles of saltwater shoreline, 297 acres of lakes, 881 acres of rock, and 57 acres of alpine.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the North Central Prince of Wales Island Biogeographic Province. This province is characterized by rolling, gentle landforms but with localized rugged topography. Limestone is common and overall forest productivity is high. Karst topography and caves are often present, though there is little karst mapped in this roadless area.

Ecological Section/Subsection. The Sukkwan Roadless Area is contained within the Outer Islands Fjordlands Ecological Section (M247H) and the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F). These areas are represented by two ecological subsections (see table below). The Soda Bay Till Lowlands Ecological Subsection, which covers 99 percent of the roadless area, is composed of a rolling landscape of rounded hills and broad valleys underlain by sedimentary and volcanic bedrock. Forested wetlands, bogs, and fens are common on poorly drained soils, while productive hemlock or hemlock-spruce forests are found on colluvium or well-drained till of the hillslopes (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kuiu-Prince of Wales Fjordlands	Soda Bay Till Lowlands	99%
Outer Islands Fjordlands	Dall-Outside Complex	1%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock, and are typically about 40 inches deep. Generally, steeper areas have better-drained soils and flat areas are poorly drained.

(c) Vegetation: This area is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce, with a large cedar component. Muskeg/low-productivity forested wetlands cover extensive areas in south and central Sukkwan. Approximately 323 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 47,610 acres mapped as forest land of which 19,801 acres or 42 percent are mapped as productive old-growth forest. Of the productive old growth, 6,380 acres or 32 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,852 acres of high-volume, coarse-canopy old growth. There are also 76 acres of second growth resulting from beach logging in 1960.

(d) Fish Resources: The streams and lakes in this area provide habitat for coho, pink, and chum salmon and steelhead trout. There are several unnamed Class I streams on Sukkwan Island, draining into Dunbar Inlet, Kasook Inlet, and Hetta Inlet (ADF&G, 2000). Eek Lake on Goat Island supports runs of coho and pink salmon (ADF&G, 2000).

(e) Wildlife Resources: This area has high populations of Sitka black-tailed deer, black bear, wolves, river otter, marten, mink, loon, and common waterfowl. Marine mammals are common on the small islands. Brown bear, moose, and mountain goats are not found on these islands (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to four different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These four LUDs are Timber Production, Old-growth Habitat, Semi-remote Recreation, and Remote Recreation.

LUD	Acres
Timber Production	18,034
Old-growth Habitat	13,735
Semi-remote Recreation	16,806
Remote Recreation	1,184

The roadless area contains only one LUD that allows development. Approximately 36 percent of the roadless area was allocated to Timber Production LUD.

Approximately 64 percent of the roadless area was allocated to non-development LUDs (Old-growth Habitat, Semi-remote Recreation, Remote Recreation). Approximately 13,735 acres, or 28 percent of the roadless area, was selected for Old-growth Habitat LUD. Approximately 34 percent of the roadless area was allocated to the Semi-remote Recreation LUD. All of Goat Island and parts of Sukkwan Island were allocated to the Semi-remote Recreation LUD, as well as small islands associated with the roadless area. Approximately 2 percent of the roadless area, primarily around Kasook Inlet, was allocated to the Remote Recreation LUD.

The area receives dispersed recreation use. No outfitter/guide permits were issued for the area in 2000. Hydaburg area residents participate in subsistence activities within the roadless area. A timber sale project is currently on the 10-year sale plan to occur within this roadless area.

(6) Appearance (Apparent Naturalness): This area is unmodified by human activity and appears to be in a natural condition.

(7) Surroundings (External Influences): There are large blocks of non-National Forest System land in the area. These include most of the east half of Dall Island, which is several miles to the west across Tlevak Straight, most of Long Island, several miles to the south, and a small area northeast of Goat Island and a large area near Hydaburg, both on Prince of Wales Island. Large areas of Native land have been harvested. Native Corporation selections within the roadless area are located in Kasook Inlet and Lake as well as the northern tip of Sukkwan Island. There are also Native Corporation subsurface rights on all of Goat Island as well as the small adjacent islands and the northern reaches of Sukkwan Island. There are two additional parcels of land on Sukkwan Island owned by Haida Village Corporation.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery (particularly the island clusters and the saltwater bays and inlets), and the opportunity to see wildlife and to study the processes, which formed this country are all attractions. The area contains seven inventoried recreation places, which cover 13,215 acres (27 percent) of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The north part of Sukkwan Island was non-National Forest System land in 1989. Most of this area has been acquired by the National Forest and is now part of the roadless area. Those areas are split estate where the subsurface rights are non-National Forest System.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The roadless area is unmodified. Its natural integrity and apparent naturalness is outstanding. The roadless area is suitable for wilderness classification based on its apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The area has moderate opportunity for solitude and high opportunity for primitive recreation. Persons visiting the roadless area are unlikely to encounter others during their entire stay. Visitors may occasionally be disturbed by floatplane and boat traffic into and out of Hydaburg and in the surrounding waterways.

The roadless area contains some steep, rugged terrain, rising to over 2,000 feet in elevation. The steep nature of portions of the area, its size, the lack of developed trails, and the presence of black bears presents a degree of challenge and the need for woods skills and experience. However, most of the roadless area has relatively gentle topography, is close to the community of Hydaburg, and is less challenging to cross. Overall, the roadless area is less challenging than many other, more remote roadless areas.

The area has good opportunity for primitive recreation, particularly on the outside shores of Sukkwan Island in the Dunbar Inlet area. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	25,022	50%
Semi-Primitive Non-Motorized (SPNM)	10,890	22%
Semi-Primitive Motorized (SPM)	13,739	28%
Roaded Modified (RM)	7	0%

The area contains seven inventoried recreation places, which cover 13,215 acres (27 percent) of the roadless area.

ROS Class	# of Rec. Places	Total Acres
P	3	8,240
SPNM	1	2,673
SPM	3	2,302
RM	0	0

There are no developed recreation facilities in the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Sukkwan Roadless Area was 23 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was also given a rating of 23.

(4) Ecologic and Geologic Values: The ecological conditions on in the roadless area are nearly pristine. There are no known unique geologic features.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 632, 671, and 672 (Goat Island and northern two-thirds of Sukkwan Islands) as primary salmon producers. VCU 672 (northeastern quarter of Sukkwan Island) was also listed as a primary sportfish producer.

The streams and lakes in this area provide habitat for coho, pink, and chum salmon and steelhead trout. There are several unnamed Class I streams on Sukkwan Island, draining into Dunbar Inlet, Kasook Inlet, and Hetta Inlet (ADF&G, 2000). West Dunbar Inlet has an estimated annual peak escapement of 26,700 pink salmon and good coho production (ADF&G, 1998). Streams on Goat Island are inhabited by coho, pink, and chum salmon. Eek Lake has runs of coho and pink salmon (ADF&G, 2000).

(b) Wildlife Resources: This area has high populations of Sitka black-tailed deer, black bear, wolves, river otter, marten, mink, loon, and common waterfowl. Marine mammals are common on the small islands. Brown bear, moose and mountain goats are not found on these islands (MacDonald and Cook, 1999).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Craig Ranger District.

(d) Karst, Cave, and Other Geologic Resources: The mapped low vulnerability karst resources encompass approximately 112 acres or less than one percent of the roadless area. There are no known glaciers or unique geologic features.

(5) Scientific and Educational Values: There are no known special features within this roadless area. Its close proximity to a population center offers a convenient opportunity to study unaltered ecological processes.

(6) Scenic Values: The area is part of the Coastal Hills character type, which is characterized by moderately-steep landforms, predominantly rounded summits, elevations up to 4,500 feet, and flat-floored, U-shaped valleys. The Sukkwan Roadless Area exhibits more moderate topography than is common in the character type. The highest point is 2,160 feet. It also possesses a wide variety of island clusters and prominent bays. This area possesses more than what is common for this character type.

The roadless area appears natural when viewed from major and minor water travel routes and from inside the area. Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include: Hydaburg Road #13, the small boat route from Ulloa Channel to Hydaburg, the saltwater use area around Hydaburg and south through Sukkwan Strait, and the community of Hydaburg.

The majority of the roadless area, approximately 91 percent, was inventoried as Variety Class B, which possesses landscape diversity common to the character type. The notable scenic features are the diverse clusters of islands and coves, particularly in the Dunbar Inlet area. Approximately 9 percent of the area was not inventoried for Variety Class type.

Most of this area, approximately 90 percent, was inventoried as Existing Visual Condition Type I, where the natural landscape has remained unaltered by human activity. Approximately 9 percent was not inventoried for EVC.

(7) Social, Cultural, and Historical Values: South Prince of Wales Island and the islands to the southwest were inhabited by the Tlingit until the Haida, who migrated north from the Queen Charlotte Islands, displaced them in the early 1700s. Since then, the islands that make up the roadless area have been within the principal traditional-use area of the Haida. Because of this history, the Haida Native Corporation made extensive land selections in this area including all of Goat Island and portions of Sukkwan Island. Subsequently, Goat Island and adjacent small islands were obtained by the federal government as part of the Haida Land Exchange. The area receives dispersed recreation use, primarily in the saltwater use areas. No outfitter/guide permits were issued for the area in 2000. Hydaburg area residents participate in some subsistence activities in the roadless area. Only VCU 632 (northern third of Goat Island) is listed among the VCUs with the highest community fish and wildlife values and none are listed among the second or third most important groups of VCUs. All VCUs were listed among those VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The boundaries of this roadless area consist primarily of saltwater shorelines. The exceptions are the lands around Kasook Lake and Kasook Inlet and the northern tip of Sukkwan Island. These are non-National Forest System lands. The boundaries with these inholdings are not well defined by topographic features. These are relatively small areas and would not prevent the roadless area being managed as a wilderness within its current boundaries. Subsurface rights on Goat Island, as well as adjacent small islands and the northern portion of Sukkwan Island, create encumbrances on those National Forest System lands.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. The roadless area is close to Hydaburg, which is approximately 30 miles by road from Hollis (a stop on the Alaska Marine Highway). There is the potential for some of the tourists visiting Prince of Wales Island to be drawn to fish, hunt, and camp in the roadless area. This general area is identified as the southern end of a potential kayak route along the west coast of Prince of Wales Island. There are several identified dispersed campsites and potential public recreation cabin sites in the bays and inlets or islands on the west side of Sukkwan Island. The area has a few good anchorages for large boats. The roadless area has three lakes in the southern portion of Sukkwan Island that may be attractive as recreation sites if trails were developed linking the lakes to the Kasook Inlet.

In 1996, the Alaska Visitors Association proposed a backcountry recreation lodge to accommodate 480 people in Kasook Inlet.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resources: There are no fish habitat improvement projects planned in the roadless area.

(4) Wildlife Resources: There are no wildlife habitat improvement projects planned in the roadless area.

(5) Timber Resources: There are 19,801 acres inventoried as productive old-growth forest and 76 acres of second-growth forest are mapped in the roadless area. Of this, approximately 17,346 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,829 acres (4 percent) of this roadless area are estimated to be suitable for timber production. Approximately 429 of the suitable acres are mapped as high-volume old growth; of these acres, 74 are mapped as high-volume, coarse-canopy old growth.

Managing timber in most of the roadless area would require developing a road system and LTFs. Timber management has not occurred to date because of its lack of good access and uncertainty of long-term ownership.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: Mineral development potential is very low. There are two explored prospects for copper on southern Sukkwan Island (USGS Mineral Resources Data website, 2001). This area contains an estimated 48,429 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 7,556 of these acres are considered to have moderate potential for development. Recently acquired lands in the north part of Sukkwan Island are split estate, where the subsurface rights are not owned by the National Forest System.

(8) Transportation and Utilities: There are no proposed transportation or utility corridors in the roadless area. An existing transportation corridor and potential utility corridor is located across Sukkwan Strait along the Prince of Wales coastline.

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The mapped karst resources encompass approximately 112 acres or less than one percent of the roadless area. There are no other known areas of scientific interest in the roadless area.

(11) Land Use Authorizations: There are no special use permits or other land use authorizations in the roadless area.

(12) Land Status: Native Corporation selections within the roadless area are located in Kasook Inlet and Lake, as well as the northern tip of Sukkwan Island. There are also Native Corporation subsurface rights on all of Goat Island as well as the small adjacent islands and the northern reaches of Sukkwan Island. The State of Alaska has three inholdings in the southern part of the Island. There are two additional parcels of land on Sukkwan Island that are owned by Haida Village Corporation.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Both the Haida Native people and the Haida Native Corporation have a strong interest in the future of this area because of its historic occupancy by the Haida and because of adjacent corporation land selections.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Sukkwan Roadless Area. In 2001, HR 2908 proposed managing the roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The City of Hydaburg recommended that the South Pass area should be managed for scenic quality, recreation, and not for intensive timber management. They recommended that Sukkwan Island be managed for primitive recreation or old-growth habitat. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated on the forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments were available for the roadless area.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended the Sukkwan Island complex for long-term protection. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 504 for permanent protection as LUD II.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

The President of the Hydaburg Cooperative Association spoke “against the wilderness plans for the south end of Prince of Wales Island” during the Craig Hearing.

A number of individual commenters identified Sukkwan Island as an area in need of protection. Some individuals recommended this area for permanent protection as wilderness.

(2) Nearby Roadless and Wilderness Areas and Uses: The area is separated from other roadless areas by saltwater. The Dall Roadless Area (501) is several miles to the west and south, across Tlevak Straight. The Soda Bay Roadless area (505) is just north of Goat Island, across North Pass on Prince of Wales Island. The Hydaburg Roadless Area (533) is about 2 miles to the east, across Sukkwan Straight on Prince of Wales Island. The Nutkwa Roadless Area (531) is about 4 miles to the southeast, also on Prince of Wales Island. The South Prince of Wales Wilderness is adjacent to (and southeast of) the Nutkwa Roadless Area. Recreation and subsistence are the main uses in these areas. Use levels are generally low.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	220	250
Ketchikan (Pop. 14,070)	50	90
Wrangell (Pop. 2,308)	90	150
Petersburg (Pop. 3,324)	110	150

Hollis, the closest stop on the Alaska Marine Highway, is approximately 30 miles by road from Hydaburg.

(4) Relative Contribution to the National Wilderness Preservation System: The Sukkwan Roadless Area is located approximately 1 mile across the Sukkwan Straight from Hydaburg, which is on Prince of Wales Island. The area consists of Sukkwan Island, Goat Island, Blanket Island, Jackson Island, the McFarland Islands, and numerous small islands. The area is characterized by low elevation, gently rolling topography; however, there are also steep, rugged areas. The highest point is 2,160 feet.

The roadless area is unmodified. Its natural integrity and apparent naturalness is outstanding. The area has moderate opportunity for solitude and high opportunity for primitive recreation. Persons visiting the roadless area are unlikely to encounter others during their entire stay. Visitors may occasionally be disturbed by floatplane and boat traffic into and out of Hydaburg and in the surrounding waterways.

None of the area is rated as distinctive for the character type from a visual perspective, but it has a wide variety of island clusters and prominent bays, which is more than is typical for this character type.

The roadless area includes about 6,380 acres of high-volume, old-growth forest. Of these acres, approximately 1,852 are mapped as high-volume, coarse-canopy old growth.

The roadless area is in the North Central Prince of Wales Island Biogeographic Province and makes up about 3 percent of the province. It is one of 15 inventoried roadless areas found in the province and that make up about 44 percent of the province. Unlike much of the province, the area has very little karst and no other outstanding or unique features. The Sukkwan Roadless Area forms the southern-most tip of the province and does not include any of Prince of Wales Island. The Karta River Wilderness represents about 3 percent of the province. This province also contains the Mt. Calder-Mt. Holbrook, Pt. Baker-Pt. Protection, and the Salmon Bay Congressionally-designated LUD II areas, which make up about 5 percent of the province, and are managed to remain roadless.

The Sukkwan Roadless Area lies within two ecological sections; it represents 5 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section and 0.1 percent of the Outer Islands Fjordlands Ecological Section. Both of these ecological sections include moderately sized areas in existing wilderness (13 and 10 percent, respectively) and existing LUD II (8 and 17 percent, respectively), and are well represented by other existing non-development LUDs (33 and 36 percent, respectively).

The vast majority (99 percent) of the roadless area is in the Soda Bay Till Lowlands Ecological Subsection; this portion of the roadless area represents 33 percent of the entire ecological subsection, none of which is in existing wilderness or LUD II, but 44 percent is protected by other existing non-development LUDs. The remainder (1 percent) of the roadless area is in the Dall-Outside Complex Ecological Subsection; this portion represents only 0.1 percent of the entire ecological subsection, 19 percent of which is protected in existing LUD II and 40 percent in other existing non-development LUDs.

The Sukkwan Roadless Area is rated at 23 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 30th from the highest (along with 7 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for managing the roadless area in an unroaded condition, but there is little support for designating the area as a wilderness. The WARS score is high, relative to other areas of Southeast Alaska and the biogeographic province, but the area has no outstanding or unique features, such as significant karst

features or outstanding scenery, which are not well represented elsewhere in the province. However, designation of the area would add long-term Congressional protection to about 33 percent of the Soda Bay Till Lowlands Ecological Subsection, which currently contains no areas with long-term Congressional protection. The WARS score is more related to the undeveloped nature and relative size of the area. This portion of the province is made up of smaller islands and not as representative of the larger Prince of Wales Island, which makes up most of the province. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate.

V. Environmental Consequences

The Sukkwan Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, or 4 is implemented. Approximately 64 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 36 percent; however, the potential for developing timber is relatively good. The land in the development LUD provides an estimated 1,829 acres that are suitable for timber production (3 percent of the suitable acres on the Craig Ranger District). Approximately 74 of the suitable acres are classified as high-volume, coarse-canopy old growth. Mineral development potential is very low. There are two explored prospects for copper on southern Sukkwan Island. This area contains an estimated 48,429 acres of undiscovered locatable mineral resources; 7,556 of these acres are considered to have moderate potential for development. The values associated with the natural settings of the roadless area could be affected by timber management activities allowed on Sukkwan Island by the Forest Plan.

Alternatives 5 or 7 would convert about one-third of the area to Recommended Wilderness, which would also reduce the area in the development LUD by about 44 percent. Timber harvest would not be allowed in the Recommended Wilderness LUD and the area suitable for timber production would be reduced to 1,091 acres. The potential for other development, including recreation, mineral, and hydroelectric, could be restricted. Mineral prospecting and development could continue until areas are designated as wilderness by Congress. Designation of the area would add long-term Congressional protection to a portion of the Soda Bay Till Lowlands Ecological Subsection, which currently contains no areas with long-term Congressional protection. The values associated with the natural settings of the southern part of Sukkwan Island portion of the roadless area would be provided long-term protection if designated wilderness.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and development and recreation developments could continue, but no timber harvest would be allowed. Designation of the area would add long-term Congressional protection to about 33 percent of the Soda Bay Till Lowlands Ecological Subsection, which currently contains no areas with long-term Congressional protection. The values associated with the natural settings of the roadless area would be provided long-term protection if designated LUD II.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed, and the potential for other development, including recreation, mineral, and hydroelectric, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area would add long-term Congressional protection to about 33 percent of the Soda Bay Till Lowlands Ecological Subsection, which currently contains no areas with long-term Congressional protection. The values associated with the natural settings of the roadless area would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 504 (in acres)								
Land Use Designation	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 4**	**Alt 5**	**Alt 6**	**Alt 7**	**Alt 8**
Recommended Wilderness					16,142		16,142	49,759
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation	1,184	1,184	1,184	1,184				
Enacted Municipal Watershed								
Old-growth Habitat	13,735	13,735	13,735	13,735	7,864		7,864	
Semi-remote Recreation	16,806	16,806	16,806	16,806	15,740		15,740	
Recommended LUD II						49,759		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production	18,034	18,034	18,034	18,034	10,013		10,013	
TOTAL	**49,759**	**49,759**	**49,759**	**49,759**	**49,759**	**49,759**	**49,759**	**49,759**
Suitable Timber Lands	1,829	1,829	1,829	1,829	1,091	0	1,091	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Soda Bay (505)

ACRES (NFS): 63,147

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Kuiu-Prince of Wales Fjordlands, Prince of Wales Mountains

2003 WILDERNESS ATTRIBUTE RATING: 20 (20, 20)

I. Overview and Description

(1) Location and Access: The Soda Bay Roadless Area is on the west side of Prince of Wales Island, approximately 50 air miles west of Ketchikan, 6 air miles south of Craig, and 3 air miles northwest of Hydaburg. The roadless area borders developed lands to the east. These developments along with non-National Forest System lands divide the roadless area into two portions, which are generally located north and south of Trocadero Bay. Non-National Forest System lands lie to the north, the west, and the southeast. Waterfall, a world class fishing resort, is near the southwestern boundary. Hollis is the nearest stop on the Alaska Marine Highway and is approximately 10 miles to the east via the Craig-Klawock-Hollis Road. Access is via the Prince of Wales road system and by boat through Trocadero and Soda Bays and North Pass/Tlevak Straight. Access to uplands is by foot or helicopter. There are no places suitable for landing wheeled aircraft. In addition, there are three Forest Service maintained trails that access the area that include Trocadero, Soda Lake, and Canoe Point Trails.

(2) History: The Soda Bay area is known to have been an important site for the indigenous peoples. The area was inhabited by the Tlingit until the Haida, who migrated north from the Queen Charlotte Islands, displaced them in the early 1700s. The coastal area was used from the late 1800s through the early 1900s as a base for the commercial fishing industry. In recent times, the community of Craig and the community of Hydaburg have been connected by a road that now serves as the east boundary of this roadless area. The construction of the road has resulted in the Trocadero Bay and the Soda Bay areas being used for recreation and subsistence activities by local residents.

(3) Geography and Topography: The area is characterized by low elevation, gently rolling topography; however, there are also steep, rugged areas. The highest point is nearly 2,500 feet. There are several lakes in the roadless area, the largest of which is Lake St. Nicholas. Freshwater lakes cover approximately 223 acres. There are also several island clusters in the bays bordering the roadless area. The area includes approximately 128 islands and islets (31 of these are greater than 10 acres) totaling 1,921 acres. There are approximately 83 miles of saltwater shoreline, 174 of rock, and 1,109 acres of alpine tundra. Trocadero and Soda Bays are prominent features.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the North Central Prince of Wales Island Biogeographic Province. This province is characterized by rolling, gentle landforms with localized rugged topography. Limestone is common and overall forest productivity is high. Karst topography and caves are present.

Ecological Section/Subsection. The Soda Bay Roadless Area is contained within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F) and the Prince of Wales Mountains Ecological Section (M247I). These areas are represented by four ecological subsections (see table below). The Soda Bay Till Lowlands Ecological Subsection (54% of the roadless area) is composed of a rolling landscape of rounded hills and broad valleys underlain by sedimentary and volcanic bedrock. Forested wetlands, bogs, and fens, comprising a majority of the landcover, are found on poorly drained soils, while productive hemlock or

hemlock-spruce forests are found on colluvium or well-drained till of the hillslopes. The Central Prince of Wales Volcanics Ecological Subsection (44% of the roadless area) is mostly comprised of volcanic bedrock, though outcrops of dioritic and conglomerate rocks exist. The shallow, unproductive, and organic soils of the higher elevations support wetlands and forests of mixed-conifers and logdepole pines. The well-drained till soils of the lower elevations support moderate to highly-productive hemlock and hemlock-spruce forests which comprise more than half the landcover in this ecological subsection (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kuiu-Prince of Wales Fjordlands	Soda Bay Till Lowlands	54%
	Klawock Inlet Till Lowlands	1%
Prince of Wales Mountains	Central Prince of Wales Volcanics	44%
	Hetta Inlet Metasediments	1%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock and are typically about 40 inches deep. Generally, steeper areas have better-drained soils and flat areas are poorly drained.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce, with a large cedar component. Approximately 3,937 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 57,351 acres mapped as forest land of which 21,258 acres (37 percent) are mapped as productive old-growth forest. Of the productive old growth, 8,542 acres (40 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 1,556 acres of high-volume, coarse-canopy old growth. There are also 586 acres of second growth resulting from previous logging.

(d) Fish Resources: The primary species found in these streams are coho, pink, and chum salmon, as well as steelhead trout. Harris River, St. Nicholas Creek, the Trocadero Bay watershed, and Soda Creek are the primary producers in this area.

(e) Wildlife Resources: This area has high populations of Sitka black-tailed deer, black bear, wolves, river otter, marten, mink, loon, and common waterfowl. Brown bear and mountain goats are not found here (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to seven Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These LUDs are Timber Production, Modified Landscape, Scenic Viewshed, Old-growth Habitat, Semi-remote Recreation, Special Interest Area, and Municipal Watershed.

LUD	Acres
Timber Production	33,670
Modified Landscape	2,367
Scenic Viewshed	421
Old-growth Habitat	20,303
Semi-remote Recreation	3,738
Special Interest Area	818
Municipal Watershed	1,829

Approximately 58 percent of the roadless area was allocated to a development LUD (Timber Production, Modified Landscape, Scenic Viewshed). The Timber Production LUD accounts for approximately 53 percent of the roadless area.

Approximately 4 percent of the roadless area, along Trocadero Bay and Ulloa Channel, was allocated to the Modified Landscape LUD. About 421 acres (approximately 1 percent of the roadless area) was allocated to the Scenic Viewshed LUD, primarily located along Trocadero Bay

Approximately 42 percent of the roadless area contains one of four non-development LUDs (Old-growth Habitat, Semi-remote Recreation, Special Interest Area, Municipal Watershed). The Old-growth Habitat LUD was assigned to approximately 32 percent of the roadless area. Approximately 6 percent of the area was allocated to the Semi-remote Recreation LUD, including the islands in Trocadero Bay. A 818-acre parcel of land in upper Soda Bay (approximately 1 percent of the roadless area) was allocated to a geologic Special Interest Area LUD in recognition of the carbonated soda springs in the area. Land managed under this designation has unique features and is protected for public use, study, and enjoyment of these natural areas. Approximately 3 percent of the roadless area was allocated to the Municipal Watershed LUD. North Fork Lake is the water source for the community of Craig. The city operates a dam and pipeline system at this lake under the authorization of a special use permit.

Much of Shelikof Island, off the coast of the roadless area, has been developed for timber management. Shelikof Island is visible from the roadless area. The area has been identified as having mineral development potential. The roadless area contains the 3,535-acre Big Harbor Mineral tract.

Dispersed recreation, mostly associated with hiking, fishing, and hunting, is the primary recreation use of the area. Recreation facilities located within the roadless area include the Trocadero Trail, Soda Lake Trail (there are no interpretive signs or platforms on the Soda Lake Trail), and Canoe Point Picnic Area and Trail. Recreation facilities located directly adjacent to the roadless area along the road corridor include Harris River Campground and Picnic Area, Trocadero Overlook Picnic Area, and Cable Creek Fish Pass Interpretive Site. Trocadero Bay is popular for marine based recreation by the residents of Craig and Klawock. Sport fishing is popular in the estuary at Trocadero Bay. Black bear viewing is popular along Snipe and Cable Creeks. Two kayak outfitter/guides operate in this area for approximately 12 service days in 2000.

(6) Appearance (Apparent Naturalness): The interior of this roadless area is unmodified and in a natural condition although timber related developments border much of the area. Developments along the eastern and northern boundaries and to the north of Lake Nicholas adversely affect the apparent naturalness of nearby portions of the roadless area from important viewpoints and travelways.

(7) Surroundings (External Influences): The large blocks of private land to the west, north, and southeast of this roadless area have been extensively developed. Timber harvest has occurred on nearby Shelikof Island, which is in Soda Bay and on Suemez Island, which is southwest of this roadless area.
Waterfall, a world class fishing resort, is located on private land on the west side of this area. The road connecting Craig with Hydaburg forms the east boundary of this roadless area. There are large parcels of land surrounding Trocadero Bay and Soda Bay that have been conveyed to Native Corporations. Not all of the Native Corporation owned lands have received timber management activities. In addition, there are large parcels of land that have been encumbered by both the State of Alaska and Native Corporations that have yet to be conveyed. Also, there are developed recreation facilities including the Harris River Campground and Picnic Area and the Trocadero Overlook Picnic Area that are located just outside the roadless area boundary.

(8) Attractions and Features of Special Interest: The limestone formations and carbonate mineral springs along Soda Lake and Soda Creek have been recognized as unique and interesting by their designation as a Special Interest Area and may have potential for increased recreation through trails and interpretation. The karst and caves on the peninsula where Meares Passage meets Tlevak Strait are also of special interest. The natural features of the area, the scenery, the saltwater bays and inlets, and the opportunity to see wildlife and to study the processes which formed this country may all be attractions. The excellent saltwater salmon fishing is a major attraction in the vicinity of this roadless area. The area contains 20 inventoried recreation places, which cover 20,440 acres (32 percent) of the roadless area black bear viewing in the Trocadero Bay area and sport fishing in the streams.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: Additional developments on National Forest System lands to the east have modified the eastern boundary somewhat. Several small areas along the beach that were logged, but not roaded, have been included in the roadless area. Trees have regrown in these old beach-logged areas and they no longer dominate the foreground views. There are large parcels of land surrounding Trocadero Bay and

Soda Bay that have been conveyed to Native Corporations. Several smaller areas along the developed boundaries have been excluded between the Draft and Final SEIS to improve the potential for manageability of the area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The interior of the roadless area is unmodified and in a natural condition although developments border much of the area. The only boundaries adhering to topographic features are the coastline of Trocadero Bay, Soda Bay, and North Pass. Although some human activity surrounds the area, the land within this area is in a natural state and is suitable for wilderness classification. Overall, the area has very high, to high natural integrity and apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is moderate opportunity for solitude and high opportunity for primitive recreation within this roadless area. The sights and sounds of adjacent management activities may be evident from much of the interior of this roadless area. Visitors are likely to encounter other people during fishing and hunting season, especially in the Trocadero Bay and Soda Bay tidal flats.

The roadless area contains some steep, rugged terrain, rising to over 2,000 feet in elevation in several places. The steep nature of portions of the area, its size, the lack of developed trails, and the presence of black bears present a degree of challenge and the need for woods skills and experience. Other portions of the roadless area have relatively gentle topography, are close to roads leading to nearby communities, and are less challenging to cross. Overall, the roadless area is less challenging than many other more remote roadless areas.

Most of the recreation potential centers around primitive and semi-primitive marine opportunities in Trocadero and Soda Bays. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive	28,698	45%
Semi-Primitive Non-Motorized (SPNM)	27,676	44%
Semi-Primitive Motorized (SPM)	4,897	8%
Roaded Natural (RN)	258	0%
Roaded Modified (RM)	1,586	3%

The area contains 20 inventoried recreation places, which cover 20,440 acres (32 percent) of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	2	7,311
SPNM	5	8,634
SPM	5	3,192
RN	3	258
RM	10	1,045

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

Developed recreation facilities in the roadless area include the Trocadero Bay and Soda Bay Trail and Canoe Point Picnic Area and Trail. There is also an opportunity to develop a wildlife viewing platform in the Trocadero Bay area. Waterfall, a world class fishing resort, is located on private land near the southwest boundary of the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in

items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Soda Bay Roadless Area Roadless Area was 23 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 20. The difference in ratings is primarily due to changes in ownership and ongoing developments in adjacent lands. Separate ratings for the two large parcels were also completed; these resulted in a score of 20 for both the north and the south parts of the roadless area.

(4) Ecologic and Geologic Values: The limestone formations and carbonate mineral springs in the geologic special interest area along Soda Lake and Soda Creek and the karst and caves on the peninsula where Meares Passage meets Tlevak Strait are special geologic features. The area has high deer and salmon populations.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) lists all the VCUs in this area as primary salmon producers. VCU 622, a small section in the northeast of the roadless area, is also listed as a primary sportfish producer (ADF&G, 1998).

The primary species found in these streams are coho, pink, and chum salmon, as well as steelhead trout. Harris River, St. Nicholas Creek, the Trocadero Bay watershed, and Soda Creek are the primary producers in this area. The Harris River has an estimated annual peak escapement of 101,600 pink salmon and has very good coho production. St. Nicholas Creek, in VCU 623, has an estimated 44,600 pink salmon and good coho production (ADF&G, 1998). In addition to these species, Trocadero Bay Creek also provides habitat for Dolly Varden (ADF&G, 2000). Trocadero Bay has an estimated 126,400 pink salmon and very good coho production. Soda Creek has an estimated peak escapement of 139,200 pink salmon and excellent coho production. North Tlevak Strait, just south of Soda Bay, has an estimated annual peak escapement of 40,600 pink salmon and good coho production (ADF&G, 1998). There are numerous other unnamed creeks in this roadless area that provide anadromous fish habitat (ADF&G, 2000).

Fish pass weirs were completed on Cable Creek, which drains into Trocadero Bay, in 1986.

(b) Wildlife Resources: This area has high populations of Sitka black-tailed deer, black bear, wolves, river otter, marten, mink, loon, and common waterfowl. Brown bear and mountain goats are not found here (MacDonald and Cook, 1999). Based on data compiled from 1985 to 1994, VCUs 622 and 625 are listed among the top 25 percent of VCUs for black bear harvest (ADF&G, 1998).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Craig Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There is one area of karst in this roadless area that is located on the peninsula where Meares Passage meets Tlevak Strait. Karst resources are mapped on approximately 1,058 acres (2 percent) of the roadless area. All the karst is mapped as low vulnerability. There are no glaciers, but the carbonate mineral springs along Soda Lake and Creek are a special geologic feature. There are a number of springs on both sides of the creek that have built up deposits of tufa. Although most of the area has not been studied, it is considered important enough geologically to have been designated as a special interest area.

(5) Scientific and Educational Values: The limestone formations and carbonate mineral springs along Soda Lake and Soda Creek are a geologic special interest area. The Forest Service has constructed a trail to draw attention to this site. There are also opportunities to study forests, wildlife, fish, and geologic processes.

(6) Scenic Values: The Soda Bay Roadless Area is part of the Coastal Hills character type, which is characterized by moderately steep landforms, predominantly rounded summits, elevations to 4,500 feet, and flat-floored, U-shaped valleys. Numerous island groups are also common. This area exhibits landscapes that are somewhat less rugged than is common in the character type. Peaks and ridgetops in the roadless area range from 1,500 to 2,500 feet. There are several island clusters in the bays bordering the roadless area.

The area appears natural when viewed from Meares Passage, Ulla Channel, and most of Soda Bay, and Hydaburg Highway. Human activity, mainly timber related developments, can be seen outside of the area in south Trocadero Bay and Shelikof Island, where this area provides a natural background to the modification. Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include: FH#9, the road from Craig to Hydaburg; the small boat route from Ulla Channel to Hydaburg; Buccareli, Trocadero Bays, saltwater use areas; the Waterfall Resort Site and Ulla Channel north and south of the resort; and the Trocadero Bay and Soda Bay hiking trails.

The vast majority of the area, approximately 99 percent, was inventoried as a Variety Class B, landscape diversity that is common in character type. There are no outstanding large scenic features in the area, though small-scale scenic features may exist.

Approximately 93 percent of this roadless area is Type I Existing Visual Condition (EVC), the natural landscape has remained unaltered by human activity. Approximately 2 percent of the area has an EVC Type III, where changes in the landscape may be seen by the average person, but appear natural. Another 1 percent of the area is in EVC Type IV, where changes in the landscape are easily noticed by the average person, but resemble natural patterns. Approximately 2 percent of the area is in EVC Type V, where changes in the landscape are obvious to the average person, and appear to be major disturbances and about 1 percent of the area is not inventoried. Past development has moderately or heavily altered the landscape in small portions of Soda and Trocadero Bays.

(7) Social, Cultural, and Historical Values: The Soda Bay Roadless Area is known to have been an important site for the indigenous peoples. The roadless area was inhabited by the Tlingit until the Haida, who migrated north from the Queen Charlotte Islands, displaced them in the early 1700s. The coastal area was used from the late 1800s through the early 1900s as a base for the commercial fishing industry. In recent times, the community of Craig and the community of Hydaburg have been connected by a road that now serves as the east boundary of this roadless area. Recreation activities concentrate around semi-primitive marine opportunities in Trocadero and Soda Bays, as well as along the existing road system to existing recreation facilities. Although portions of these bays are fairly remote, one is likely to encounter recreation boaters or other marine traffic in much of this area. The construction of the Craig/Hydaburg road has resulted in the Trocadero Bay and the Soda Bay areas being more widely used for recreation and subsistence by local residents. The only developed recreation facilities in the roadless area are the Soda Bay Trail, Trocadero Trail, and Canoe Point Picnic Area and Trail. Waterfall, a world class fishing resort, is located on private land near the southwest boundary of the roadless area. VCUs 624 and 632 are listed among the VCUs with the highest community fish and wildlife values. VCUs 631 was listed in the second most important group, and VCUs 622 and 625 were listed in the third most important group. All VCUs except 625 were listed among those VCUs with the highest sensitivity to disturbance of subsistence use areas. VCU 625 was listed as moderately sensitive (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The saltwater boundaries are well defined. The land boundaries consist primarily of roaded areas or land survey lines for the private land rather than topographic features. A road (and associated timber harvest) extends approximately 5 miles into the roadless area near Lake St. Nicholas. The North Fork Lake area, located in the northwestern part of the roadless area, is the community of Craig's domestic water source. A pipeline and other facilities are located in this portion of the roadless area. In addition, the roadless area is divided into two separate parts by Trocadero Bay and the roaded area at the head of the bay. These factors would complicate managing the area as a wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. The roadless area is close to Waterfall. Waterfall is a world-class resort that draws tourists interested in fishing in a wilderness-type setting. The roadless area is also near Hollis, a stop on the Alaska Marine Highway. There is the potential for some of the tourists visiting Waterfall and other visitors to the island to be drawn to fish, hunt, and camp in the roadless area. This area offers excellent opportunities to develop trails that connect the Prince of Wales Island road system to saltwater bays. This would support excellent fishing and waterfowl hunting during the appropriate seasons as well as provide day hiking opportunities for local residents and tourists. Outstanding freshwater fishing and scenic areas can be supported with public recreation cabins, mooring facilities, and trails. There is also potential for wildlife viewing opportunities by constructing wildlife viewing platforms and duck blinds. Much of the remaining area is well suited for dispersed recreation in a semi-primitive setting.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resources: No fish habitat enhancement projects are currently planned for the roadless area.

(4) Wildlife Resources: No wildlife habitat enhancement projects are currently planned for the roadless area.

(5) Timber Resources: There are 21,258 acres of productive old-growth forest and 586 acres of second-growth forest due to harvest mapped in the roadless area. Of this, approximately 17,993 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 5,621 acres (9 percent) of this roadless area are estimated to be suitable for timber production. Approximately 2,347 of the suitable acres are mapped as high-volume old growth; of these acres, 508 are mapped as high-volume, coarse-canopy old growth. Managing timber in most of the roadless area would require extending the existing road system into the roadless area.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: The potential for mineral development is very low. Canoe Point Stream falls on the edge of the U.S. Bureau of Land Management identified Big Harbor mineral tract, which contains silver, gold, and copper. The Big Harbor mine was active from 1913 to 1916. At Soda Creek, an estimated 3,546 acres of land was identified as a mineral activity tract having low potential for experiencing economic mineral exploration or development (Coldwell, 1990; USDA Forest Service, 1991). In addition, this area contains an estimated 55,789 acres of undiscovered locatable mineral resources that are considered to have low potential for development (Brew et al., 1990; USDA Forest Service, 1991).

(8) Transportation and Utilities: A major road corridor connecting Craig and Klawock with Hydaburg runs along the eastern boundary of the roadless area. A powerline connecting Klawock and Hydaburg has been proposed. It would follow the Klawock/Hydaburg road. Craig's water supply facilities are located at North Fork Lake. The city operates a dam and pipeline system at this lake.

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a water demand within the roadless area. A 1,829-acre piece of land is dedicated to Municipal Watershed LUD to protect water sources for the Craig community.

(10) Areas of Scientific Interest: The limestone formations and carbonate mineral springs along Soda Lake and Soda Creek, part of a geologic special interest area, and karst and caves on the peninsula where Meares Passage meets Tlevak Strait may be of scientific interest. The mapped karst resources encompass approximately 1,058 acres or 2 percent of the roadless area. Management of these areas as wilderness may restrict opportunities for study.

(11) Land Use Authorizations: Craig's water supply facilities located at North Fork Lake are under special use authorization.

(12) Land Status: No private inholdings occur in this roadless area. However, there are large parcels of land that have been encumbered by both the State of Alaska and Native Corporations that have yet to be conveyed.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area is important to local residents for subsistence and recreation use.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Soda Bay Roadless Area. In 2001, HR 2908 proposed managing the roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The City of Craig recommended that the Forest Service protect their municipal watershed, which is within the roadless area. Commenters from Craig stated that timber harvest near Trocadero Bay would be inconsistent with the subsistence and multiple-use needs of the people of the island and that Soda Creek and Canoe Point Stream should be protected as a wild and scenic rivers. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated on the Forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments were available for the roadless area.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 505 for permanent protection as LUD II. SEACC recommended this area for permanent protection through LUD II designation.

The President of the Hydaburg Cooperative Association spoke “against the wilderness plans for the south end of Prince of Wales Island” during the Craig Hearing. At the same hearing, the President of the Craig Community Association stated “they really can’t support any of the alternatives”.

(2) Nearby Roadless and Wilderness Areas and Uses: The Karta Roadless Area (510) lies to the northeast across a narrow developed area. The Karta River Wilderness is adjacent to the Karta Roadless Area, 4 to 5 miles northeast of the Soda Bay Roadless Area. The 12-mile Roadless Area (534) lies to the east across a narrow developed area. Sukkwan Roadless Area (504) lies to the southeast across North Pass. Dall Island (501) and Suemez Island (502) Roadless Areas lie to the southwest across Tlevak Straight. The Outer Islands Roadless Area (503) lies to the west across San Alberto Bay. Recreation and subsistence are major uses in these areas.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	205	230
Ketchikan (Pop.14,070)	50	115
Wrangell (Pop. 2,308)	75	130
Petersburg (Pop. 3,324)	95	140

Hollis, approximately 10 miles by road to the east is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Soda Bay Roadless Area is located on the west side of Prince of Wales Island southeast of Craig. The area is characterized by low elevation, gently rolling topography; however, there are also steep, rugged areas. The highest point is nearly 2,500 feet.

The interior of the roadless area is unmodified and in a natural condition, although developments border much of the area. The only boundaries adhering to topographic features are the coastline of Trocadero Bay, Soda Bay, and North Pass. Overall, the area has very high, to high natural integrity and apparent naturalness. The natural integrity and apparent naturalness scores were the same as they were for the overall roadless area when the north and southern portions were rated separately. There is moderate opportunity for solitude and high opportunity for primitive recreation within this roadless area. The sights and sounds of adjacent management activities may be evident from much of the interior of this roadless area. Visitors are likely to encounter other people during fishing and hunting season, especially in the Trocadero Bay and Soda Bay tidal flats.

None of the area is rated as distinctive for the character type from a visual perspective. The area has moderate to high special geologic features, which include the limestone formations and carbonate mineral springs along Soda Lake and Soda Creek, and karst development on the peninsula where Meares Passage meets Tlevak Strait. The area associated with Soda Lake and Soda Creek are managed as Special Interest Areas under the Forest Plan.

The roadless area includes about 8,542 acres of high-volume, old-growth forest. Of these acres, approximately 1,556 are mapped as high-volume, coarse-canopy old growth.

The roadless area is in the North Central Prince of Wales Island Biogeographic Province and makes up about 4 percent of the province. It is one of 15 inventoried roadless areas (small parts of 4 other roadless areas are also in the province) found in the province and that make up about 44 percent of the province. The province includes one designated wilderness. The Karta River Wilderness represents about 3 percent of the province. This province also contains the Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and the Salmon Bay Congressionally-designated LUD II areas, which make up about 5 percent of the area, and are managed to remain roadless.

The Soda Bay Roadless Area lies within two ecological sections; it represents 3 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section and 3 percent of Prince of Wales Mountains Ecological Section. Both of these ecological sections contain relatively small areas in existing wilderness (13 and 8 percent, respectively) and existing LUD II (8 and 3 percent, respectively), but are well represented by other existing non-development LUDs (33 and 22 percent, respectively).

Over half (54 percent) of the roadless area is in the Soda Bay Till Lowlands Ecological Subsection; this portion of the roadless area represents 23 percent of the entire ecological subsection, none of which is in existing wilderness or LUD II, but 44 percent is protected by other existing non-development LUDs. Less than half (44 percent) of the roadless area is in the Central Prince of Wales Volcanics Ecological Subsection; this portion of the roadless area represents 6 percent of the entire ecological subsection. Approximately 8 percent of this ecological subsection is located in existing wilderness and another 23 percent is protected by other existing non-development LUDs. The Klawock Inlet Till Lowlands Ecological Subsections and Hetta Inlet Metasediments each comprise 1 percent of the roadless area; these portions of the roadless area represent 2 percent and 0.4 percent of their respective ecological subsections. None of the Klawock Inlet Till Lowlands Ecological Subsection is in existing wilderness or LUD II and 7 percent is protected by other existing non-development LUDs. Within the Hetta Inlet Metasediments Ecological Subsection, 2 percent is in existing wilderness, 9 percent in existing LUD II, and 14 percent is protected by other existing non-development LUDs.

The Soda Bay Roadless Area is rated at 20 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 53rd from the highest (along with 16 other roadless areas) among the 109 Tongass inventoried roadless areas. Both the northern and southern portions of the roadless area scored 20 when rated separately.

There is both local and national support for managing the roadless area in an unroaded condition but there is little support for designating the area as a wilderness. The WARS score is moderate, relative to other areas of Southeast Alaska. The area has special geologic features associated with the limestone and carbonate mineral springs and localized karst development. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Designation of the area would add Congressional protection to about 23 percent of the Soda Bay Till Lowlands Ecological Subsection and 2% of the Klawock Inlet Till Lowlands Ecological Subsection; neither of these ecological subsections are currently represented in wilderness or LUD II. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate to high.

V. Environmental Consequences

The Soda Bay Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 42 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 58 percent; however, the potential for developing timber is relatively good. The land in the development LUD provides an estimated 5,621 acres that are suitable for timber production (8 percent of the suitable acres on the Craig Ranger District). Approximately 508 of the suitable acres are classified as high-volume, coarse-canopy old growth. The potential for mineral development is low. Canoe Point Stream falls on the edge of the U.S. Bureau of Land Management identified Big Harbor mineral tract, which contains silver, gold, and copper. The Big Harbor mine was active from 1913 to 1916. This area contains 3,546 acres of land identified as a mineral activity tract having low potential for experiencing economic mineral exploration or development. In addition, this area contains an estimated 55,789 acres of undiscovered locatable mineral resources that are considered to have low potential for development. The values associated with the natural settings of the roadless area could be affected by ongoing developments allowed by the Forest Plan. The high karst values are protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and development and recreation developments could continue but timber harvest would not be allowed. Designation of the area would add Congressional protection to about 23 percent of the Soda Bay Till Lowlands Ecological Subsection and 2 percent of the Klawock Inlet Till Lowlands Ecological Subsection; neither of these ecological subsections are currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area, including old growth and karst values, would be provided long-term protection if designated LUD II

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed. The potential for development, including recreation, mineral, and hydroelectric, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area would add Congressional protection to about 23 percent of the Soda Bay Till Lowlands Ecological Subsection and 2 percent of the Klawock Inlet Till Lowlands Ecological Subsection; neither of these ecological subsections are currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area, including old growth and karst values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 505 (in acres)								
Land Use Designation	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 4**	**Alt 5**	**Alt 6**	**Alt 7**	**Alt 8**
Recommended Wilderness								63,147
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area	818	818	818	818	818		818	
Remote Recreation								
Enacted Municipal Watershed	1,829	1,829	1,829	1,829	1,829		1,829	
Old-growth Habitat	20,303	20,303	20,303	20,303	20,303		20,303	
Semi-remote Recreation	3,738	3,738	3,738	3,738	3,738		3,738	
Recommended LUD II						63,147		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	421	421	421	421	421		421	
Modified Landscape	2,367	2,367	2,367	2,367	2,367		2,367	
Timber production	33,670	33,670	33,670	33,670	33,670		33,670	
TOTAL	**63,147**	**63,147**	**63,147**	**63,147**	**63,147**	**63,147**	**63,147**	**63,147**
Suitable Timber Lands	5,621	5,621	5,621	5,621	5,621	0	5,621	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Eudora (507)

ACRES (NFS): 200,493

BIOGEOGRAPHIC PROVINCE: South Prince of Wales Island

ECOLOGICAL SECTION: Dixon Entrance Lowlands, Prince of Wales Mountains

2003 WILDERNESS ATTRIBUTE RATING: 24 (19, 25)

I. Overview and Description

(1) Location and Access: The Eudora Roadless Area is on southeast Prince of Wales Island. The Clarence Strait lies to the east and Dixon Entrance lies to the south. The Cholmondeley Sound lies to the north and across a strip of non-National Forest System land. The South Prince of Wales Wilderness and Roadless Area 531 lie to the west. The roadless area lies approximately 30 air miles southwest of Ketchikan while Hollis, the closest community on the Alaska Marine Highway, is approximately 20 miles to the north. The roads that provide access to the Eudora Roadless Area are: the road on the south side of Kitkun Bay and north of the North Arm of Moira Sound, generally referred to locally as the Lancaster Cove road (along the northeast boundary of the roadless area), the Bokan Mountain Mine Road at the head of Kendrick Bay (near the center of the roadless area), the newly constructed road on the point between the South Arm and West Arm of Cholmondeley Sound, and the road through Sulzer Portage along the south side of West Arm of Cholmondeley. Only the Sulzer Portage road connects to the primary Prince of Wales road system and this is through private lands not open for public use. The only other access to the Eudora Roadless Area is by boat, helicopter, or floatplane. There are no places suitable for landing wheeled aircraft, but there are several lakes large enough for floatplanes to use. Access to upland areas away from these lakes and from saltwater is by foot or helicopter.

(2) History: The east coast of Prince of Wales Island has a rich history of prehistoric use by Alaska Native cultures. The area was inhabited by the Tlingit until the Haida displaced them from the southern third of the island in the early 1700s. Surveys covering much of the roadless area have not revealed any archaeological sites. This may be due to the location of the roadless area between the Kasaan Haida and the Tongass Tlingit peoples. The Tongass Tlingit claimed Johnson Cove and Moira Sound while the Kaigani Haida claimed the area to the north. The roadless area has been, and is today, important for subsistence hunting and fishing. The Eudora Roadless Area is considered a remote area on Prince of Wales Island. The many major sounds and bays provide bases for commercial fishing including anchorages, fish processing facilities, boat repair sites, and fish buying stations. There has been interest in the mineral resources since the early 1900s resulting in several patented mining claims and numerous unpatented claims that are currently active. Sulzer Portage, a small boat and foot portage used since the early 1900s, connects the east and west sides of the island through Cholmondeley Sound and Hetta Inlet. All of the land in this area is non-National Forest Service lands. The Forest Service did retain an easement corridor of the historic trail. The State has made a number of selections scattered over the roadless areas entire length.

(3) Geography and Topography: The Eudora Roadless Area has a varied topography. The Cholmondeley Sound area has rugged and steep mountains with elevations over 3,000 feet. Headlands, separating the major bays and sounds, have similar topography. The interior of the area has somewhat flat to moderate relief. There are many large lakes in the area. The largest is Kegan Lake. Freshwater covers approximately 4,218 acres of this area. About 10,830 acres is covered by rock and 664 acres is covered by alpine tundra. This area has 380 miles of saltwater shoreline. There are 524 islands and islets (33 of these are greater than 10 acres) totaling 2,251 acres.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The roadless area is in the South Prince of Wales Island Biogeographic Province. The climate is warm and wet; deep snow is rare or transient at the lower

elevations. The topography is steep and rugged and the coastline is highly dissected. The vegetation in this province is strongly influenced by southwesterly storms.

Ecological Section/Subsection**.** The Eudora Roadless Area is contained within the Dixon Entrance Lowlands Ecological Section (M247J) and Prince of Wales Mountains Ecological Section (M247I). These areas are represented by three ecological subsections (see table below). The South Prince of Wales Granitics Ecological Subsection (42% of roadless area) contains granitic outcrops and glacially scoured areas of volcanics and metasediments. The landscape is mostly rolling hills and lowlands spotted with hundreds of lakes and ponds. The well-drained soils on the hillslopes support moderately productive forests and the poorly drained soils of the lowlands support forested and non-forested wetlands that comprise almost half of the landcover in this subsection. The Moira Sound Complex Ecological Subsection (41% of roadless area) is a deeply dissected landscape of sedimentary and volcanic bedrock carved in to fjords and broad valleys. Bogs and wetlands are common on the poorly drained colluvial soils. Hemlock and hemlock-spruce forests are found along the wetland margins. Terrain in the Hetta Inlet Metasediments Ecological Subsection (17% of roadless area) rises from deep fjords to sedimentary and volcanic peaks over 3,000 feet in elevation. Soils in the lowlands, lying over poorly drained glacial till, support wetlands. Productive forests are rare in the Hetta Inlet Metasediments Ecological Subsection (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Dixon Entrance Lowlands	South Prince of Wales Granitics	42%
Prince of Wales Mountains	Moira Sound Complex	41%
	Hetta Inlet Metasediments	17%

(b) Soils: Soils are generally highly organic with low clay content. They are formed over bedrock and their typical depth is 40 inches.

(c) Vegetation: Vegetation in this area is that typical of Southeast Alaska coastal temperate rain forests. Mixed conifer and western hemlock-red-cedar plant associations dominate the area. Western hemlock, Sitka spruce, and cedar are the most common trees. Approximately 458 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Wetland soils play a strong role in vegetation development within the roadless area. Approximately 664 acres of alpine are mapped for the area.

There are approximately 176,297 acres mapped as forest land of which 87,687 acres (50 percent) are mapped as productive old-growth forest. Of the productive old growth, 43,349 acres (49 percent) are mapped as high-volume, old-growth forest. The productive old growth includes about 21,288 acres of high-volume, coarse-canopy old growth. There are also 578 acres of second growth resulting from beach logging.

(d) Fish Resources: Primary fish-bearing streams in the area include Portage Creek, Big Creek, Miller Creek, Aiken Creek, Myrtle Creek, Kegan Creek, Kugel Creek, Johnson Cove Creek, Perkins Creek, Hessa Lake and Creek, and Nichols Lake. These waters provide habitat for sockeye, coho, pink, and chum salmon, steelhead trout, and Dolly Varden char.

(e) Wildlife Resources: This area supports populations of Sitka black-tailed deer, black bear, wolves, river otter, marten, mink, bald eagles, loons, and common waterfowl. The American peregrine falcon may migrate through the area. Trumpeter swans, marbled murrelets, osprey, and Peale's peregrine falcons, as well as the Queen Charlotte goshawk, may occur in the area (USDA Forest Service, 1998). Moose reportedly inhabit Prince of Wales Island, but they have not been sited here. There are no brown bear or mountain goats in this area (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to six Land Use Designations (LUDs), under the 1997 Tongass Land and Resource Management Plan. These six LUDs are Timber

Production, Modified Landscape, Minerals, Semi-remote Recreation, Old-growth Habitat, and Wild River. The Minerals LUD is a secondary LUD that overlays the other land uses.

LUD	Acres
Timber Production	70,601
Modified Landscape	9,762
Minerals*	28,756
Semi-remote Recreation	80,388
Old-growth Habitat	34,517
Wild River	5,226

* Note that acres in the Minerals LUD are included in the Timber Production, Old-growth Habitat, Semi-remote Recreation and Wild River LUD acres.

Approximately 40 percent of this roadless area (not including the Minerals LUD overlay) contains one of two development LUDs (Timber Production, Modified Landscape). About 70,601 acres, or approximately 35 percent of the roadless area, was allocated to the Timber Production LUD. Approximately 5 percent of the roadless area was allocated to the Modified Landscape LUD, primarily located in the northern part of the roadless area. Approximately 14 percent of the roadless area was allocated to the Minerals LUD overlay.

Approximately 60 percent of this area was allocated to one of three non-development LUDs (Semi-remote Recreation, Old-growth Habitat, Wild River). The Semi-remote Recreation LUD was designated to approximately 40 percent of the roadless area. Approximately 17 percent of the roadless area was allocated to the Old-growth Habitat LUD. About 5,226 acres for the Kegan Lakes and Streams was allocated to the Wild River LUD. This LUD covers approximately 3 percent of the roadless area. The Kegan Lakes and Streams were recommended for the wild river designation because of its nationally significant fisheries, recreation, and scenic values.

There are a wide variety of mining and recreation uses that occur within the area. Two mining claims, totaling approximately 300 acres, located near McLean Arm and Niblack are non-National Forest Service land surrounded by National Forest System lands. They are considered part of the roadless area. There are several other patented claims along the boundaries of the roadless area that are outside the roadless area. Several unpatented mining claims are also located within, or adjacent to, the roadless area.

There are public recreation cabins located at Kegan Cove, Kegan Creek, and Josephine Lake. One Forest Service maintained trail connects Kegan Cove to Kegan Lake passing the two recreation cabins (no other Forest Service maintained trails in the area). A mooring buoy is located in Kegan Cove (the only one located in the area). Kegan Cove and Kegan Creek Cabins receive the highest use by visitors on the Craig Ranger District. Kegan Creek is heavily used for subsistence activities. There is also a Forest Service maintained dock and skiff located on Kegan Lake for visitors renting the Kegan Creek Cabin. One outfitter/guide permit was issued in 2000 in the roadless area (total use was 18 service days). This roadless area supports subsistence use, mostly by residents of Metlakatla. There are two special use permits in the area. Both are located in Kendrick Bay. One is for a bunkhouse and road associated with mining claims. The other is for net pens associated with the Southern Southeast Regional Aquaculture Association. There is one floating lodge in Niblack Anchorage that operates seasonally (Gold Coast Lodge). There are no Forest Service Outfitter Guide or Special Use permits associated with this lodge. They rent skiffs to clients who fish and hunt in the area. Other inventoried recreation uses in the area include dispersed camping, viewing scenery, beachcombing, mooring pleasure craft, hunting, and sport fishing.

(6) Appearance (Apparent Naturalness): A few small pockets of old logging activity scattered throughout the area are the only exceptions to the natural appearance of the roadless area. The southern portion of the roadless area has had extensive blowdown due to storms coming in from the Pacific Ocean. This is a natural situation but some observers may think that this is due to logging. Large areas of recent harvest on the private lands throughout the eastern half of Cholmondeley Sound have had a significant effect on the highly scenic areas of this water body and the apparent naturalness of the adjacent roadless area.

(7) Surroundings (External Influences): The western boundary of the Eudora Roadless Area coincides with the South Prince of Wales Wilderness and Roadless Area 531. The eastern and southern boundaries are saltwater. The most significant external factor is the development on the private lands. An irregular northern boundary results

from the extensive private lands in the area owned by the Kootznoowoo Village Corporation. There are also developed areas on National Forest System lands along the south side of Kitkun Bay and at the head of Kendrick Bay (in the east). The State has made small land selections scattered along the entire coast for the purpose of creating communities sometime in the future.

(8) Attractions and Features of Special Interest: The natural features of the area, including the scenery, the saltwater bays and inlets, the extensive karst, the opportunity to see wildlife, and to study the processes that formed this country are attractions. The extensive canoeing and kayaking opportunities within the area are outstanding attractions. Fishing and solitude are also attractions. The area contains 34 inventoried recreation places, which cover 75,055 acres (37 percent) of the roadless area. The cabins are important attractions, especially the cabin at Kegan Cove. It is the most heavily used cabin on the Craig Ranger District.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: Areas along the South and West Arms of Cholmondeley Sound that have been harvested but do not contain roads were added to the roadless area. The boundaries have also been adjusted to reflect more accurate mapping. Areas converted to State or private ownership have been removed from the roadless area. The net result has been a reduction in the size of the area by approximately 14 percent. Several smaller areas near developments on the boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the roadless area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: Except in the north, a few areas on Moira Sound, and Kendrick Bay, the roadless area has well-defined natural boundaries. Management activities on private and some State lands have affected the natural integrity and apparent naturalness of adjacent lands within the roadless areas. The natural integrity and apparent naturalness of the remainder of the roadless area is very high. The mining patents are inclusions within the roadless area, but these areas are small and they do not affect the overall natural integrity. The appearance of the roadless area is consistent with wilderness designation.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is very high opportunity for solitude and primitive recreation within the area, except in the northern fringe where the sights and sounds of management activities may be evident. The area is large and remote from human settlements. Floatplanes and boats are used to transport people to the numerous fishing lakes and three recreation cabins within the area. Noise from these craft may disturb visitors.

There are outstanding opportunities for primitive recreation due to the high scenic quality, the vastness of the area, and the wide variety of recreation opportunities. These include saltwater related activities in protected, remote, and scenic bays, opportunities to recreate at inland lakes, and alpine hiking opportunities through extensive areas of relatively open country. The roadless area contains steep, rugged terrain, rising to over 3,000 feet in elevation. The steep nature of portions of the area, its vastness, and the presence of black bears presents a high degree of challenge and the need for woods skills and experience.

This area provides primarily primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	178,468	89%
Semi-Primitive Non-Motorized (SPNM)	19,174	10%
Roaded Modified (RM)	2,636	1%

The area contains 34 inventoried recreation places, which cover 75,055 acres (37 percent) of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	26	70,809
SPNM	7	4,216
RM	2	30

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

Three public recreation cabins, mooring buoys, and trails are located within the area. There is also a Forest Service maintained dock and skiff located on Kegan Lake for visitors renting the Kegan Creek Cabin. There is a trail linking the Kegan Lake cabin with saltwater and one linking Paul Lake with saltwater, however the Paul Lake trail is not Forest Service maintained.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Eudora Roadless Area was 23 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 24. The combination of the area north of the South Arm of Cholmondeley Sound and the area north of the North Arm of Moira Sound was rated separately and received a score of 19. The southern area received a score of 25 when rated separately. These two ratings reflect the much higher influence of developments in adjacent areas in the northern portions of the roadless area.

(4) Ecologic and Geologic Values: The roadless area is part of a large unroaded area that includes most of the southern half of Prince of Wales Island.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 674, 679, 682, 692, and 698 as primary salmon producers and the majority of the rest of the roadless area as secondary producers. VCU 684 by Dickman Bay was listed as a primary sportfish producer.

Primary fish-bearing streams in the area include Portage Creek, Big Creek, Miller Creek, Aiken Creek, Myrtle Creek, Kegan Creek, Kugel Creek, Johnson Cove Creek, Perkins Creek, Hessa Lake and Creek, and Nichols Lake. These waters provide habitat for sockeye, coho, pink, and chum salmon, steelhead trout, and Dolly Varden char.

Portage Creek, which lies in the northwest corner of this roadless area and provides habitat for coho, pink, and chum salmon, has an estimated peak escapement of 159,400 pink salmon and good coho salmon production (ADF&G, 1998; ADF&G, 2000). Big Creek flows though VCU 674 into the West Arm of Cholmondeley Sound. This free flowing system is an important producer of coho, chum, and pink salmon, as well as steelhead (ADF&G, 2000). Miller Creek, which drains into North Arm, provides habitat for coho, pink, and sockeye salmon, steelhead trout and Dolly Varden char (ADF&G, 2000). This stream receives an estimated peak escapement of 40,800 pink salmon (ADF&G, 1998).

Myrtle and Niblack Lakes contain Dolly Varden char.

Kegan Lake and Stream flow into the north side of Moira Sound within VCU 684. The system includes two major lakes, several small lakes, and streams. Kegan Lake and streams are known for recreational and subsistence fishing of sockeye, coho, and pink salmon, steelhead, and rainbow trout. Dolly Varden char are

also present (TLMP, 1997; ADF&G, 2000). ADF&G lists this system among the 65 "most important" watersheds in Southeast Alaska for fisheries values. Kegan Creek receives an estimated peak escapement of 30,900 pink salmon (ADF&G, 1998).

The upper portions of the Hunter Bay system lie within this roadless area west of the South Prince of Wales Wilderness. The area is regionally popular for fishing and recreation. Fishing is excellent for pink, chum, sockeye, and coho salmon, as well as cutthroat trout and Dolly Varden char. Disappearance Creek, off the south arm of Cholmondeley Sound, is a spring fed stream with high fisheries productivity.

Johnson Lake and Perkins Creek are areas of high quality fish habitat of regional significance. The extensive floodplain in the Johnson Lake area contains large spawning areas and the lake is a major producer of sockeye salmon. Chum, coho, and pink salmon are also present in the system. Johnson Cove Creek receives an estimated peak escapement of 53,500 pink salmon and has very good coho salmon production (ADF&G, 1998).

(b) Wildlife Resources: This area supports populations of Sitka black-tailed deer, black bear, wolves, river otter, marten, mink, bald eagles, loons, and common waterfowl. The American peregrine falcon may migrate through the area. Trumpeter swans, osprey, and Peale's peregrine falcons as well as the Queen Charlotte goshawks may, or do, occur in the area. Marbled murrelet nests have been located on south Prince of Wales Island. Eggshells were found just east of Lancaster Cove and in the Port Johnson area. One unconfirmed report indicates that goshawks were sighted at the mouth of Cannery Creek (USDA Forest Service, 1998). Moose reportedly inhabit Prince of Wales Island, but they have not been reported here. Brown bear and mountain goats do not inhabit this area (MacDonald and Cook, 1999).

The main dispersal corridors throughout the area are thought to be the beach fringe and saddles between mountains. Currently, the old-growth blocks that consist of Port Johnson, Kitkun Bay, and Lancaster are all connected by beach fringe and inland old-growth forest. This is an important wildlife corridor. The west side of South Arm is an important corridor because it provides the best link for animals in southern Prince of Wales Island to migrate north along the coast to Sulzer Portage. There are two 800-foot elevation saddles that connect South Arm to Moira Sound and Klakas Inlet (USFS, 1998).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Craig Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are extensive karst resources in this roadless area, primarily in the north. The exceptions are two small bands of low vulnerability karst at the head of Nichols Bay and a small area near the peak above Ingraham Bay. There are also two areas of high vulnerability karst near Eudora Mountain and several low vulnerability areas around Chomly; vulnerability increasing at higher elevations and a large area of mostly mid-vulnerability karst surrounding Green Monster Mountain and Billie Mountain. The karst resources represent 4,419 acres (2 percent) of the roadless area. Approximately 70 percent of these karst resources are mapped as high vulnerability karst. There are no glaciers or other unique geologic features known in this area.

(5) Scientific and Educational Values: The area offers opportunities to study fish, wildlife, forests, karst systems, and geologic processes; however, the remoteness of the area makes access for study difficult.

(6) Scenic Values: The Eudora Roadless Area is part of the Coastal Hills Character Type, which consists of moderately-steep landforms, predominantly rounded summits, elevations up to 4,500 feet, and flat-floored, U-shaped valleys. This large area exhibits almost the full range of landscape characteristics of this character type from

the rugged, diverse terrain of the West Arm of Cholmondeley Sound and the Eudora Mountain to the rugged coastline along Clarence Strait to the many island groups throughout the area.

The developments on private and some State land have affected the natural integrity of adjacent areas, but these have not severely reduced the overall integrity of the roadless area. Operations on mining related private lands have affected the natural integrity of adjacent areas to some degree. Most of the developments in adjacent areas around Cholmondeley Sound can be seen from the surrounding waterways. When viewing this roadless area from the priority routes listed in the Forest Plan, which includes most of Eudora, an unmodified landscape dominates the view. Also, once in the roadless area, the landscape remains scenic and unmodified.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: Moira Sound, Niblack Bay, North Arm to Aiken Cove, South Arm of Cholmondeley Sound, Johnson Cove and Lake, and the mouth of Moira Sound West and South Arms (saltwater use areas), the Kegan Lake and Kegan Cove public recreation cabins; Kegan Lake and streams, Niblack Lake and streams, Nichols Bay, the head of McLean Arm, Kendrick Bay, Dickman Bay, and the mouth of West and South Moira Sound (boat anchorages).

About 24 percent of this area is inventoried as Variety Class A, possessing a high degree of landscape diversity relative to the character type. High scenic quality landscapes include the areas south of the West Arm of Cholmondeley Sound around Dora Bay, the Eudora Mountain area, and the complex of diverse lake basins and intricate saltwater shoreline to the south and east of this peak. Approximately 74 percent of the roadless area is inventoried as Variety Class B, possessing landscape characteristics common to the character type. About 1 percent of the area is uninventoried.

Virtually all (approximately 97 percent) of this roadless area was inventoried as Existing Visual Condition (EVC) Type I. This means the natural landscape has remained unaltered by human activity. Approximately 1 percent was inventoried as EVC Type III, in which the average person notices changes in the landscape, but they do not significantly distract. Another 1 percent was inventoried as EVC Type V, where changes in the landscape are obvious to the average person, and appear to be major disturbances.

(7) Social, Cultural, and Historical Values: The east coast of Prince of Wales Island has a rich history of prehistoric use by Native cultures. The area was inhabited by the Tlingit until the Haida displaced them from the southern third of the island in the early 1700s. Surveys covering much of the roadless area have not revealed any archaeological sites. This may be due to the location of the roadless area between the Kasaan Haida and the Tongass Tlingit peoples. The Tongass Tlingit claimed Johnson Cove and Moira Sound while the Kaigani Haida claimed the area to the north. The roadless area has been, and is today, important for subsistence hunting and fishing. The Eudora Roadless Area is considered a remote area on Prince of Wales Island. The many major sounds and bays provide bases for commercial fishing including anchorages, fish processing facilities, boat repair sites, and fish buying stations. There has been interest in the mineral resources since the early 1900s resulting in several patented mining claims and numerous unpatented claims that are currently active. Sulzer Portage, a small boat and foot portage used since the early 1900s, connects the east and west sides of the island through Cholmondeley Sound and Hetta Inlet. All of the land in this area is non-National Forest Service land. The Forest Service did retain an easement corridor of the historic trail. The State has made a number of selections scattered over the roadless areas entire length. The area receives some subsistence use, mostly from Metlakatla. VCUs 674 and 679 (by Cholmondeley Sound), and 692 (by South Arm Moira Sound) are listed among the VCUs with the highest community fish and wildlife values. No VCUs are listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: There are several places where the private lands associated with mineral patents and other areas where valid mining claims, especially in Minerals LUD areas, may affect the ability to manage the immediate surrounding area in a roadless condition. Despite this, the area, as a whole, can be easily managed in the roadless condition. Almost all of the State and private lands have been excluded from the boundary of the roadless area. Management as a wilderness would be improved if the northern boundary were moved south to a well-defined topographic feature and away from developments on private lands and related to the South Arm Timber Sale.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Cruise ships regularly stop in Ketchikan. There is the potential for some of these tourists to be drawn to fishing, hunting, and camping in the roadless area. There is a potential for outfitter/guide permits to increase. There is an opportunity to manage this area for primitive and semi-primitive recreation. There is some opportunity to increase developed recreation facilities with additional cabins and new trails. This area has poor road access to its northern boundary, but it does have good boat access from the Ketchikan area (weather permitting). Additional recreation and tourism potential include additional mooring buoys, trails, sea kayaking, cross-country hiking, wildlife viewing, dispersed camping, sea kayaking, beachcombing, improved access to sport fishing and hunting opportunities, viewing scenery (from private and commercial marine craft), and viewing wildlife.

In 1996, the Alaska Visitor Association (AVA) proposed hut-to-hut hiking for 25 persons/day and a day- use boat dock for 50 persons/day in the Kegan Lake area.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resources: The recently completed fish habitat inventory indicates that there is potential for salmon enhancement projects such as constructing fish passes on several of the streams within the area.

(4) Wildlife Resources: There are no wildlife habitat improvement projects currently planned within the roadless area.

(5) Timber Resources: There are 87,687 acres inventoried as productive old-growth forest in the roadless area and 578 acres of second growth resulting from beach logging. Of this, approximately 56,626 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 11,572 acres or 6 percent of this roadless area are estimated to be suitable for timber production. Approximately 5,251 of the suitable acres are mapped as high-volume old growth; of these acres, 2,361 are mapped as high-volume, coarse-canopy old growth. The potential for managing timber in this roadless is dependent on the development of a road system and log transfer facilities. The rugged terrain over much of the area limits the opportunity for management of its resources, particularly the timber. Timber harvest is currently being considered for an area near Moira Sound.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: Mineral development potential is high. The number of existing mineral patents, located claims, and the expressed interest in the mineralized geology of the area indicate that mineral exploration and development is likely. Explorations in 1988-89 are reported to indicate the presence of a variety of rare earth elements such as yttrium. The Hunter Bay area, outside of the South Prince of Wales Wilderness, and the Kegan Lakes and streams are identified by the U.S. Bureau of Land Management as having high potential for mineral development. Adjacent to Hunter Bay are 121 unpatented mining claims. The Kegan Lakes and streams are in a Class II tract of estimated mineral potential. There are mining claims on the east side of Lake Luelia. The US Geologic Survey classifies the region around Bokan Mountain and the south end of the Johnson River corridor is a Class I tract of minerals. A uranium deposit was located at Bokan Mountain in the late 1970s and partially worked at that time. Although buffered outside the actual roadless area, mapped shot-rock roads that serviced the mine were developed from local rock and reportedly exhibit significant radioactivity. Significant natural radioactivity is also reportedly present around the mountain, which would be in the roadless area. The mine is considered abandoned and efforts to locate the owners to discuss clean-up issues have not been successful. The area near Johnson Cove is a Class II tract. The Niblack area has high mineral potential for precious metals and strategic minerals. Numerous active mining claims have been located, and there is currently active mineral exploration taking place. There are 25 patented and 246 unpatented mining claims between Myrtle Lake and the Niblack Anchorage area (TLMP, 1997; USFS, 1998).

This area contains 50,008 acres of land identified as a mineral activity tract with 31,507 acres having a high to moderate potential for experiencing economic mineral exploration or development (Coldwell 1990; USDA Forest Service, 1991). A total of 28,756 of these acres are allocated to the Minerals LUD. The Minerals LUD is intended to encourage the prospecting, exploration, development, mining, and processing of locatable minerals in areas with the highest potential for mineral development. This is to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when minerals developments occur.

In addition, this area contains an estimated 149,713 acres of undiscovered locatable mineral resources (Brew et al. 1990; USDA Forest Service, 1991); 128,191 of these acres are considered to have moderate to high potential for development.

(8) Transportation and Utilities: There are no existing or planned transportation or utility corridors in the roadless area.

(9) Water Availability and Use: Three public recreation cabins and a private residence create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The mapped karst resources encompass approximately 4,419 acres or 2 percent of the roadless area.

(11) Land Use Authorizations: There is a private residence permit and many mining claims.

(12) Land Status: There are a number of mining patents within the boundary of this area. These inclusions total approximately 300 acres. A portion of the roadless area in the north has encumbrances. This encumbered land is adjacent to land owned by the Kootznoowoo Native Corporation. The State has made small land selections scattered along the entire coast for the purpose of creating communities sometime in the future. There is additional land that may be conveyed to the State south of Moira Sound on Clarence Strait.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives local use for subsistence and recreation activity. Existing recreation uses include viewing scenery, viewing wildlife, dispersed camping, public recreation cabin use, cross-country hiking, and beachcombing.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill included a portion of the Eudora Roadless Area, approximately 24,655 acres near Kegan Lake. In 2001, HR 2908 proposed that the southern two-thirds of the roadless area (the portion that drains into Moira Sound south to Cape Chacon) be designated a wilderness. The bill proposed managing the northern portion as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The Southeast Alaska Conservation Council (SACC) and others recommended against road building and logging. They stated that the Moira Sound area merited special protection for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. The US Geologic Survey recommended that Cape Chacon (the southern-most portion of the roadless area) be managed as Modified Landscape LUD rather than a more restrictive LUD based on the mineral potential of the area. Letters written in response to an “alert” put out by the SACC recommended that the Kegan Lake area be given the strongest protection possible. Several people attending public hearings held in Southeast Alaska also recommended no roading or logging in the Kegan Lake area. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association (AVA) recommended that no new wilderness be designated. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing areas not designated as wilderness for timber. In 1996, the AVA proposed hut-to-hut hiking for 25 persons per day and a day use boat dock for 50 persons per day in the Kegan Lake area.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: Comments were received as part of scoping for the Moira Timber Sale EIS in 1999/2000. The City of Saxman recommended no road building or logging in the area between Point Johnson, Moira Sound, and North Arm because it would compromise an important anchorage in Moira Sound by removing vegetation that provides a screen against the wind.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as one of 13 roadless areas considered to have outstanding fish and wildlife values. They indicated that the area they recommend for protection contains a mix of productive habitats, and would dramatically increase the long-term functional value of the existing, adjacent South Prince of Wales Wilderness. The area has great connectivity to the South Prince of Wales Wilderness Area. They stated that Eudora is one of the most pristine roadless areas left on Prince of Wales Island. They indicated that the important wildlife values provided by this area warrant management that ensures the long-term integrity of its habitats, ecosystem processes, and ecological functions

The Alaska Department of Fish and Game rated the Eudora roadless area (VCUs 682, 683, 684, 691, 692, 693, 694, 695, 699, 700, 701, 702, 703, and 704) as the fourth highest priority for protection on Prince of Wales Island and Adjacent Islands. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

SEACC recommended the Eudora area as Wilderness to be added to the South Prince of Wales Wilderness, which would create a contiguous Wilderness of approximately 300,000 acres. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 507 and 531 as adjacent to the existing South Prince of Wales Wilderness and recommended them for permanent protection as wilderness. They indicated that this combination would create a contiguous wilderness area of approximately 350,000 acres.

A number of cave/karst experts and other individuals stated that this area contains extensive karst, especially in the northern portions. They indicated that known karst areas around Eudora Mountain and Cholmondeley, as well as those near Green Monster and Billie Mountain should be protected along with adjacent developed karstlands. This would amount to about 4,500 acres of karst.

An individual thought that Moira Sound had valuable low elevation forest that should be protected. A number of individuals identified Moira Sound and Johnson Lake as areas in need of protection. Some individuals recommended the entire area for permanent protection as wilderness and some for LUD II.

(2) Nearby Roadless and Wilderness Areas and Uses: This roadless area is part of a larger contiguous unroaded area consisting of the South Prince of Wales Wilderness, Nutkwa Roadless Area (531), and McKenzie Roadless Area (519). A portion of the Nutkwa Roadless Area is LUD II. These areas are used primarily for recreation, and subsistence hunting and fishing. The use levels for most of these areas are low.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	220	250
Ketchikan (Pop. 14,070)	30	35
Wrangell (Pop. 2,308)	85	100
Petersburg (Pop. 3,324)	110	135

Hollis, approximately 20 miles north of the Cholmondeley Sound, Prince of Wales Island, is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Eudora Roadless Area is on southeast Prince of Wales Island. The Clarence Strait lies to the east and Dixon Entrance lies to the south. The Cholmondeley Sound lies to the north, across a strip of non-National Forest System land. The South Prince of Wales Wilderness and Roadless Area 531 lie to the west. The Eudora Roadless Area has a varied topography. The Cholmondeley Sound area has rugged and steep mountains with elevations over 3,000 feet. Headlands, separating the major bays and sounds, have similar topography. The interior of the area has somewhat flat to moderate relief. There are many large lakes in the area. The largest lake in the area is Kegan Lake.

The Eudora Roadless Area generally appears natural and unmodified, although it is influenced at various places along its boundaries by ongoing timber and mineral developments and associated activities. The area has very high natural integrity and apparent naturalness. When rated separately, the combination of the areas north of the South Arm of Cholmondely Sound and north of the North Arm of Moira Sound have moderate natural integrity and low apparent naturalness. The southern portion of the roadless area has outstanding natural integrity and very high apparent naturalness. The opportunity for solitude and primitive recreation is very high.

Approximately 24 percent of the landscape is considered distinctive from a scenery standpoint. There are extensive areas of karst within the roadless area and several areas of relatively high mineralization.

The roadless area includes about 43,349 acres of high-volume, old-growth forest. Of these acres, approximately 21,288 are mapped as high-volume, coarse-canopy old growth. It ranks among the top five Tongass roadless areas in terms of acres of high-volume, coarse-canopy old growth; the majority of this old growth is contained within non-development LUDs.

The Eudora Roadless Area is classified as being in the South Prince of Wales Island Biogeographic Province and makes up about 51 percent of the province. It is one of three inventoried roadless areas found within the province, which makes up about 66 percent of the province. The South Prince of Wales Wilderness is also in the province and makes up about 22 percent of the province. Additionally, about 5 percent of the province is located within the Nutkwa LUD II area.

The Eudora Roadless Area lies within two ecological sections; it represents 16 percent of the Dixon Entrance Lowlands Ecological Section and 14 percent of Prince of Wales Mountains Ecological Section. A relatively small area of Prince of Wales Mountains Ecological Section is in existing wilderness (8 percent) or existing LUD II (3 percent), but 22 percent is protected by other existing non-development LUDs. Existing wilderness is well represented (56 percent) in the Dixon Entrance Lowlands Ecological Section and an additional 28 percent is protected by other existing non-development LUDs.

Forty-two percent of the roadless area is in the South Prince of Wales Granitics Ecological Subsection; this portion of the roadless area represents 59 percent of the ecological subsection. Existing wilderness and existing non-development LUDs (40 and 48 percent of the subsection, respectively) are well represented. The Moira Sound Complex Ecological Subsection accounts for 41 percent of the roadless area; this portion of the roadless area represents 67 percent of the entire ecological subsection, 23 percent of which is protected in existing wilderness and 36 percent in existing non-development LUDs, including 0.4 percent in existing LUD II. The remaining 17 percent of the roadless area lies in the Hetta Inlet Metasediments Ecological Subsection; this portion of the roadless area represents 15 percent of the entire ecological subsection, 2 percent of which is in existing wilderness, 9 percent in existing LUD II, and 14 percent is protected by other existing non-development LUDs.

The Eudora Roadless Area was rated 24 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 25th from the highest (along with 4 other roadless areas) among the 109 Tongass inventoried roadless areas. The combination of the areas north of the South Arm of Cholmondeley Sound and north of the North Arm of Moira Sound was rated separately and received a score of 19. The southern portion of the roadless area received a score of 25 when rated separately.

There is both local and national support for designating the southern two-thirds of the roadless area as wilderness and for managing the remainder in an unroaded condition. Designation of the total area would create a large wilderness along with the South Prince of Wales Wilderness. Areas with karst and mineralization would be included. The degree of timber harvest in adjacent lands in the northern portion of the roadless area adds importance to the old growth within the roadless area. The roadless area contains one of the highest acreages of high-volume, coarse-canopy old growth among Tongass roadless areas. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate to high.

V. Environmental Consequences

The Eudora Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, or 4 is implemented. Approximately 60 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 40 percent of the roadless area. The land in the development LUDs includes an estimated 11,572 acres that are suitable for timber production (18 percent of the suitable acres on the Craig Ranger District). Approximately 2,361 of the suitable acres are classified as high-volume, coarse-canopy old growth. The South Arm Timber Sale and other sales authorized by the Chasina FEIS would continue. This area contains 50,008 acres of land identified as a mineral activity tract having a high to moderate potential for experiencing economic mineral exploration or development. In addition, it contains over 149,713 acres of undiscovered locatable minerals, of which 128,191 are considered to have medium to high development potential. The very heavy minerals, recreation and special use programs would continue. The values associated with the natural settings of the roadless area could be affected by timber management activities allowed by the Forest Plan and ongoing minerals exploration and development. The karst and most old growth and scenic values are protected by the Forest Plan.

Under Alternative 5, a 24,437-acre portion of the Semi-remote Recreation and Wild River LUDs would be converted to Recommended Wilderness LUD. This would not affect timber management because this area is currently allocated to a non-development LUD. The area suitable for timber management would not change from Alternative 1. The ongoing recreational use, special uses, and mineral management that occur within the Recommended Wilderness LUD area could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the Dickman Bay, Kegan and Niblack drainages portion of the roadless area would be provided long-term protection if designated wilderness.

Under Alternative 6, 50,035 acres would be converted to Recommended LUD II, and all remaining acres converted to Recommended Wilderness LUD. Timber harvest would not be allowed. The ongoing recreational use, special uses, and mineral management that occurs could continue within the Recommended LUD II area, but may be restricted in the Recommended Wilderness LUD area. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including scenic, old growth, and karst values, would be provided long-term protection if designated LUD II or wilderness.

Under Alternatives 7, a 150,459-acre portion of the roadless area in Semi-remote Recreation, Old-growth Habitat, Wild River, and Timber Production LUDs would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed in the Recommended Wilderness LUD and the total area suitable for timber harvest would be reduced to 3,467 acres. The ongoing recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the majority of the roadless area, including scenic, old growth, and karst values, would be provided long-term protection if designated wilderness.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed. The ongoing recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including scenic, old growth, and karst values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 507 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness					24,437	150,458	150,459	200,493
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	34,517	34,517	34,517	34,517	34,515		16,310	
Semi-remote Recreation	80,388	80,388	80,388	80,388	61,013		302	
Recommended LUD II						50,035		
LUD II								
Wild, Scenic, Recreational River	5,226	5,226	5,226	5,226	168		60	
Experimental Forest								
Scenic Viewshed								
Modified Landscape	9,762	9,762	9,762	9,762	9,760		9,760	
Timber production	70,601	70,601	70,601	70,601	70,600		23,602	
TOTAL	**200,493**	**200,493**	**200,493**	**200,493**	**200,493**	**200,493**	**200,493**	**200,493**
Suitable Timber Lands	11,572	11,572	11,572	11,572	11,572	**0**	3,467	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Christoval (508)

ACRES (NFS): 7,367

BIOGEOGRAPHIC PROVINCE: Southern Outer Islands

ECOLOGICAL SECTION: Kuiu-Prince of Wales Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 19

I. Overview and Description

(1) Location and Access: The Christoval Roadless Area is located on the southern tip of Heceta Island. The roadless area is approximately 20 miles northwest of Craig. Bocas de Finas lies to the southwest, Warm Chuck Inlet lies to the east, and the Gulf of Esquibel lies to the southeast. Areas developed for timber management border the area to the north. Wrangell is the closest larger town and is approximately 70 air miles northeast of the area. Heceta Island can be reached by boat or floatplane, but the roadless area does not contain lakes or sheltered harbors for boat or floatplane access. There are no places suitable for landing wheeled airplanes. Access into the roadless area from roads near the northern boundary is by foot or helicopter. There are no developed trails in the roadless area. Access into the interior is by foot or helicopter.

(2) History: The Christoval Roadless Area consists primarily of a steep, mountainous area on the southern end of Heceta Island. The uplifted littoral caves along the southwestern shore and adjacent to Warm Chuck Inlet have seen extensive use in past times.

(3) Geography and Topography: The roadless area is extremely rugged. Mountains rise steeply from sea level to elevations up to approximately 2,700 feet. There are 17 miles of coastline consisting of rocky shores and towering cliffs. Most of this roadless area is forested. There are many short streams that drain directly to saltwater. This area contains 69 acres of alpine tundra and 248 acres of rock. Bald Mountain is the principle feature and highest point. The ridge that runs east and west from the flanks of Bald Mountain is made entirely of limestone into which extensive karst systems have developed.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The roadless area is in the Southern Outer Islands Biogeographic Province. This province is characterized by low-lying, gentle topography with moderate temperatures all year. Karst topography underlies approximately a quarter of the roadless area, but the ecological effects of the karst processes are felt across much of the area. These islands contain major coastal seabird colonies and are rich in endemic vertebrate species.

Ecological Section/Subsection**.** The Christoval Roadless Area is contained entirely within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F). This area is represented by three ecological subsections (see table below). The Elevenmile Till Lowlands Ecological Subsection (71% of the roadless area) contains sedimentary and volcanic bedrock that underlies compacted glacial till and peat of various thicknesses. Gently sloped mountains, rolling hills, and lowlands characterize the landscape. The mostly impermeable soils and gentle terrain support an expansive network of forested and non-forested wetlands that cover almost half of the land in this subsection. Hillslopes provide well-drained soils that can support productive hemlock forests. Limestone and marble karstlands form the underlying geology of the North Prince of Wales-Kuiu Carbonates Ecological Subsection (28% of the roadless area). Karstlands contain a variety of unique features including conical pits, shafts, cliffs, caves, and networks of groundwater

channels resulting from the weathering of karst. Hemlock and hemlock-spruce forests are found on karst soils, which can be highly productive (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kuiu-Prince of Wales Fjordlands	Elevenmile Till Lowlands	71%
	North Prince of Wales-Kuiu Carbonates	28%
	Gulf of Esquibel Till Lowlands	1%

(b) Soils: Soils are generally formed over bedrock and are typically about 40 inches deep. Generally, steeper areas have well-drained soils and flatter areas are poorly drained. Some soils are derived from limestone.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with large components of cedar.

There are approximately 6,938 acres mapped as forest land of which 5,396 acres (78 percent) are mapped as productive old-growth forest. Of the productive old growth, 3,040 acres (56 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 628 acres of high-volume, coarse-canopy old growth. There are 16 acres of second-growth forest where beach harvest has occurred in the past.

(d) Fish Resources: The Anadromous Waters Catalogue (ADF&G, 2000) shows eight unnamed fish-bearing streams in this area, providing habitat for pink, coho, and chum salmon.

(e) Wildlife Resources: Sitka black-tailed deer, black bear, wolves, mink, dusky shrew, long-tailed vole, ermine, river otter, and bald eagles are among the species that inhabit the area. There is an abundance of sea birds along the coast because of the high limestone cliffs along a portion of the area. Goshawks are known to use Heceta Island.

(5) Management Direction and Current Uses: This roadless area was allocated to two Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These are Timber Production and Old-growth Habitat.

LUD	Acres
Timber Production	460
Old-growth Habitat	6,907

Approximately 6 percent of this roadless area was allocated to one development LUD—Timber Production. The Timber Production LUD is located in the west part of the roadless area along the Bocas de Finas waterway.

The vast majority of the roadless area, 94 percent, was allocated to one non-development LUD — Old-growth Habitat.

There are no developed recreation facilities in the roadless area. Recreation use is not well documented. There were no outfitter/guide permits issued for the roadless area in 2000. The only subsistence use is occasional hunting by residents of nearby communities. None of the VCUs in the roadless area are listed among the VCUs with the highest community fish and wildlife values.

(6) Appearance (Apparent Naturalness): Land in this roadless area is unmodified and appears in a pristine condition. Developments along the northern boundary affect the apparent naturalness of adjacent portions of the roadless area. There is a small beach logged area on the northeast coast. It was logged several decades ago and trees have regrown. It no longer appears modified.

(7) Surroundings (External Influences): Development on Heceta Island north of the roadless area is a major influence on adjacent portions of the roadless area. Additional activity is planned for the area northwest of the roadless area. The roadless area does not border other unroaded areas; however, the Maurelle Islands Wilderness is approximately 1 mile to the southwest across Bocas de Finas, and the Kogish Roadless Area (#509) is approximately 3 miles to the southeast across the Gulf of Esquibel.

(8) Attractions and Features of Special Interest: The major attractions of this area include the mountainous scenery, colorful alpine areas, and high-energy, rocky coastline – especially along Bocas de Finas and the Gulf of Esquibel. Primitive recreational opportunities include hiking, caving, exploration, solitude, challenge, camping, hunting and subsistence use, boating activities associated with salt water and use of the uplands in the area, and wildlife viewing,. Scientific study of the area in regard to karst formation is of special interest. Plans for a West Coast Kayak and Skiff with hut-to-hut development include this roadless areas shoreline. The area contains three inventoried recreation places, which cover 2,979 acres (40 percent) of the roadless area. There are no improved trails or public recreation cabins in the roadless area.

(10) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of the roadless area have changed between 1989 and 2003. The northern boundary of the roadless area has been altered to reflect more accurate mapping of the unroaded area. The major change has been the addition of the cliffs and shore southwest of Derrumba Ridge along Bocas de Finas.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: This roadless area has a high level of natural integrity and apparent naturalness. The coastline forms the eastern, southern, and western boundaries and the rugged, mountainous terrain binds the area together into a logical land unit. However, the northern boundary is not based on topographic features. This area is suitable for wilderness classification based on natural integrity and natural appearance.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a moderate opportunity for solitude and a relatively high opportunity for primitive recreation within the roadless area. Coastal areas are remote and primitive. Primitive recreation opportunities are abundant and may include hiking, camping, caving, hunting, and sea kayaking. Persons camped along the shore may be disturbed by boat traffic at times. Generally, a person camped in the interior or crossing the roadless area is unlikely to see others. Near the northern boundary of the area, one can expect to see and hear ongoing management activities and developments from some vantage points.

The roadless area contains steep, rugged terrain rising to approximately 2,700 feet in elevation. The steep nature of the area, the lack of developed trails, and the presence of black bears contribute to a high degree of challenge and the need for orientation and survivor skills and experience for people hiking or camping in the roadless area.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	3,751	51%
Semi-Primitive Motorized (SPM)	2,399	33%
Roaded Modified (RM)	1,214	16%

The area contains three inventoried recreation places, which cover 2,979 acres (40 percent) of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM SPM	1	2,417
SPM	2	490
RM	1	71

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are no developed recreation facilities in the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Christoval Roadless Area was 22 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 19. The change reflects the developments on the north part of the roadless area.

(4) Ecologic and Geologic Values: Karst and cave formation in the limestone underlying this roadless area may be of national significance because of their development, complexity, the resources they contain, and limited expanse. Extensive inventories in this area have yielded some of the highest density of caves found throughout the Alexander Archipelago and possibly the deepest and largest cave systems known in Alaska. Subalpine fir can be found on the ridge crests in protected alcoves. The karst systems found here extend from the alpine to the sea providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. Littoral caves along the outer coast contain important paleontological and cultural deposits. The cavities and bedded nature of the limestone exposed on the high cliffs along the western shore of the area are important sea bird and peregrine falcon nesting sites. The roadless area does not border other unroaded areas; however, the Maurelle Islands Wilderness is approximately 1 mile to the southwest across Bocas de Finas and the Kogish Roadless Area (#509) is approximately 3 miles to the southeast across the Gulf of Esquibel.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list any VCUs in this area as primary salmon or sport fish producers. The Anadromous Waters Catalogue (ADF&G, 2000) shows eight unnamed fish-bearing streams in this area that provide habitat for pink, coho, and chum salmon.

(b) Wildlife Resources: Sitka black-tailed deer, black bear, wolves, mink, dusky shrew, long-tailed vole, ermine, river otter, and bald eagles are among the species that inhabit the area. There is an abundance of sea birds along the coast. According to MacDonald and Cook (1999), brown bear, moose, and mountain goats do not inhabit this roadless area.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. Goshawks are

known to use Heceta Island. In addition, nine sensitive plant species are known or suspected to occur in the Thorne Bay Ranger District.

(d) Karst, Cave, and Other Geologic Resources: The ridge that runs east and west from the flanks of Bald Mountain is made entirely of limestone into which extensive karst systems have developed. Subalpine fir can be found on the ridge crests in protected alcoves. The karst systems found here extend from the alpine to the sea providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. Littoral caves along the outer coast contain important paleontological and cultural deposits. The cavities and bedded nature of the limestone exposed on the high cliffs along the western shore of the area are important sea bird and peregrine falcon nesting sites. See above in (4) Ecological and Geological Values. The karst resources encompass 1,918 acres (26 percent), of the roadless area. About 5 acres of the area are from small islands off the coast. Approximately 70 percent of the karst resources are mapped as high vulnerability karst. There are no glaciers or other unique geologic features known within this area. This area is thought to have been ice-free during the last glacial episode and is the subject of research on determining the ecology of the outer coast during the last glacial period and the extent and timing of glaciation.

(5) Scientific and Educational Values: There are opportunities to study wildlife, fish, plants, glacial history and karst formations. Karst and cave formation in the limestone underlying this roadless area are of national and international significance because of their development, complexity, the resources they contain, and their level of development. The closest educational institutions are in the communities of Craig and Klawock, and Naukati. However, due to the uniqueness of this area, much research has been focused here.

(6) Scenic Values: The Christoval Roadless Area is part of the Kupreanof Lowland character type. The character type includes predominantly low, rolling relief with elevations seldom over 1,500 feet. Numerous island groups and intricate waterways are also common in this character type. The roadless area exhibits an elevation range that is greater than is typical for the character type. The unmodified, natural landscape can be seen from surrounding waterways and from within the roadless area. The key scenic feature in this area is the prominent peak of Bald Mountain and its broad flanks. This feature provides a dramatic backdrop from the saltwater channels to the east as they weave through the small islands just north of the village of Craig.

The Visual Priority Use Areas identified by the Forest Plan, within or adjacent to the area, include the saltwater use areas within the Maurelle Island Wilderness.

Christoval possesses much more rugged relief than is commonly found in this character type. For this reason, about 85 percent of the area is rated with a Variety Class A, which has a high degree of landscape diversity relative to its character type. This extremely high percentage of variety class A is significant in itself. The Kupreanof Lowland character type is normally dominated by rolling, rounded mountains of relatively low elevation. The Christoval Roadless area exhibits extraordinary scenery and is one of two major landscape backdrops for the Maurelle Islands Wilderness Area. This area includes Bald Mountain and the scenic grass meadows located at the base of this peak. Approximately 15 percent is rated with a Variety Class B, which possesses landscape characteristics common for the character type.

About 78 percent of this area is in Type I Existing Visual Condition (EVC), landscape that is essentially unaltered by human activity. About 5 percent of the area is in Type III EVC, where changes in the landscape are seen by the average person, but they do not attract attention. Approximately sixteen percent of the area is in a Type IV EVC, where alterations to the landscape are obvious but tend to blend with natural landscape features.

(7) Social, Cultural, and Historical Values: The Christoval Roadless Area consists primarily a steep, mountainous area on the southern end of Heceta Island. Because of its steepness and lack of safe anchorages, the area was not subject to the same level of prehistoric use or historic development as other portions of Heceta Island. The area was used by the Heenya Kwaan Tlingit people of Klawock historically. Swifts cannery operated in the Warm Chuck Inlet in the early 20th century. Recreation use is very low. There are no developed recreation facilities in the roadless area. There were no outfitter/guide permits issued for the roadless area in 2000. The only subsistence use is occasional hunting by residents of nearby communities. None of the VCUs in the roadless area are listed among the VCUs with the highest community use values. VCU 561, on the east shore, is listed in the

second most important group for community use value and among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The boundaries consist of saltwater shorelines, except in the north, where no topographic features are available to form a natural boundary between the roadless area and the developed areas. The lack of a well-defined boundary affects its suitability as wilderness to some degree.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Wildlife viewing, camping, hiking, caving, sea kayaking, hunting and exploring have the potential to increase as tourism and recreation increase throughout Alaska. Tourism potential is a major part of Alaska's economy. The industry attracts over 1.1 million visitors annually. There has been a growing recognition that tourism depends on scenic quality, wildlife, and wilderness (Behnke, 1999).

Hollis, currently the closest stop on the Alaska Marine Highway is on Prince of Wales Island. Access to the area is somewhat limited; however, you can easily reach the area from Warm Chuck Inlet. The rugged terrain and limited protected anchorages around Bocas de Finas limit access on the west side. There is potential for a trail system into the Bald Mountain area from roads to the north or Warm Chuck. Karst and cave development in the roadless area may provide a unique opportunity to develop destination recreation facilities in association with interpretation and viewing of these features and topography. There is also potential for trail access from a small cove to the meadow areas at the base of the mountain. The proposed West Coast Kayak and Skiff route would traverse the west side of this roadless area. This route has been widely supported and expected to attract many recreational boaters.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: No fish habitat enhancement projects are planned for the roadless area.

(4) Wildlife Resources: No wildlife habitat enhancement projects are planned for within the roadless area.

(5) Timber Resources: There are 5,396 acres inventoried of productive old-growth forest and 16 acres of second-growth forest due to harvest mapped in the roadless area. Of this, approximately 3,262 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 24 acres or less than 1 percent of this roadless area is estimated to be suitable for timber production. Approximately 14 of the suitable acres are mapped as high-volume old growth; of these acres, less than 10 are mapped as high-volume, coarse-canopy old growth. Managing timber in most of the roadless area would require extending the existing road system into the roadless area. The rugged terrain and limited suitable land base within the roadless area limits the opportunity for managing the timber resources.

(6) Fire, Insects, and Disease: There is no history of fire in the roadless area. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: The mineral potential of the roadless area is low.

(8) Transportation and Utilities: There are no transportation or utility projects proposed within the roadless area.

(9) Water Availability and Use: There are no public recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The wildlife, fish, plants, glacial history, and karst formations are of interest. Karst and cave formation in the limestone underlying this roadless area are of national and international significance

because of their development, complexity, the resources they contain, and their level of development. The mapped karst resources encompass approximately 1,918 acres or 26 percent of the roadless area.

(11) Land Use Authorizations: There are no land use authorizations within the roadless area.

(12) Land Status: All of the roadless area is National Forest System land.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The Tongass Cave Project has expressed a high degree of interest in Heceta Island's karst resources. During 2000 and 2001 this group has held an independent 2 week long expedition to inventory karst.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. The roadless area was not one of these areas. In 2001, HR 2908 proposed managing the roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: Some commenters stated that the southeast side of Bald Mountain should have special protection because of its scenic values, unique vegetation, and unique geology. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated on the Tongass National Forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless area have been identified.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended this area for permanent protection through LUD II designation.

One individual wanted permanent protection for the roadless area around Mount Baldy.

(2) Nearby Roadless and Wilderness Areas and Uses: The roadless area does not border other unroaded areas; however, the Maurelle Islands Wilderness is approximately 1 mile to the southwest across Bocas de Finas, and the Kogish Roadless Area (#509) is approximately 3 miles to the southeast across the Gulf of Esquibel. The use levels for these areas are generally low.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are:

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	78	170
Wrangell (Pop. 2,308)	70	96
Petersburg (Pop. 3,324)	75	101
Juneau (Pop. 30,711)	181	210

Hollis, located on Prince of Wales Island, currently is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Christoval Roadless Area is located on the southern tip of Heceta Island. Bocas de Finas lies to the southwest, Warm Chuck Inlet lies to the east, and the Gulf of Esquibel lies to the southeast. Areas developed for timber management border the area to the north. The roadless area is extremely rugged. Mountains rise steeply from sea level to elevations of nearly 2,700 feet. The coastline consists of rocky shores and towering cliffs. The ridge that runs east and west from the flanks of Bald Mountain is made entirely of limestone into which extensive karst systems have developed.

The relatively small roadless area is heavily influenced by developments and associated activities on the north side of the roadless area. The area itself has relatively high natural integrity and apparent naturalness. The opportunity for solitude is moderate and the opportunity for primitive recreation is relatively high.

The Cristoval Roadless Area has unique scenic qualities, especially along its coast; approximately 85 percent of the landscape is considered distinctive from a scenery standpoint. Karst and cave formation in the limestone underlying this roadless area may be of national significance because of their development, complexity, the resources they contain, and limited expanse. Extensive inventories in this area have yielded some of the highest density of caves found throughout the Alexander Archipelago and possibly the deepest and largest cave systems known in Alaska.

The roadless area includes about 3,040 acres of high-volume, old-growth forest. Of these acres, approximately 628 are mapped as high-volume, coarse-canopy old growth.

The Cristoval Roadless Area is classified as being in the Southern Outer Islands Biogeographic Province and makes up about 3 percent of the province. It is one of four main inventoried roadless areas found within the province, which make up about 59 percent of the province. The province also includes the Maurelle Islands Wilderness, Coronation Island Wilderness, and Warren Island Wilderness, which make up about 16 percent of the province, and the Outside Islands LUD II area, which makes up an additional 33 percent of the province.

The Christoval Roadless Area lies completely within the Kuiu-Prince of Wales Fjordlands Ecological Section and represents 1 percent of the ecological section. Approximately 13 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section is in existing wilderness, 8 percent is in existing LUD II, and an additional 33 percent is protected by other existing non-development LUDs.

The majority (71 percent) of the roadless area is in the Elevenmile Till Lowlands Ecological Subsection; this portion of the roadless area represents 11 percent of the entire ecological subsection, 53 percent of which is protected by non-development LUDs, but none is in wilderness or LUD II. Twenty-eight percent of the roadless area is in the North Prince of Wales-Kuiu Carbonates Ecological Subsection; this portion of the roadless area represents 1 percent of the entire ecological subsection, 2 percent of which is in existing LUD II and 25 percent is protected by other existing non-development LUDs. The remainder (1 percent) of the roadless area is in the Gulf of Esquibel Till Lowlands Ecological Subsection. This portion of the roadless area represents 0.1 percent of the ecological subsection, which has 12 percent in existing wilderness, 40 percent in existing LUD II, and 48 percent by existing non-development LUDs.

The Cristoval Roadless Area was rated 19 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 70th from the highest (along with 13 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the roadless area in an unroaded condition and there is little support for designating the area as a wilderness. Designation would create a very small wilderness that would include the highly developed karst systems and unique scenery associated with its coastline. Designation would also add long-term Congressional protection to about 11 percent of the Elevenmile Till Lowlands Ecological Subsection, which currently contains no areas with long-term Congressional designation. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate.

V. Environmental Consequences

The Cristoval Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 94 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 6 percent of the roadless area. The land in the development LUDs includes an estimated 24 acres that are suitable for timber production (less than 1 percent of the suitable acres on the Thorne Bay Ranger District). Less than 10 of the suitable acres are classified as high-volume, coarse-canopy old growth. Ongoing cave and karst investigations would continue. The values associated with the natural settings of the roadless area are protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. Ongoing cave and karst investigation and recreation would continue and timber harvest would not be allowed. Designation would also add long-term Congressional protection to about 11 percent of the Elevenmile Till Lowlands Ecological Subsection, which currently contains no areas with long-term Congressional designation. The values associated with the natural settings of the roadless area, including scenic, old growth, and karst values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Ongoing cave and karst investigation and recreation would continue, but could be restricted. Timber harvest would not be allowed. Designation would also add long-term Congressional protection to about 11 percent of the Elevenmile Till Lowlands Ecological Subsection, which currently contains no areas with long-term Congressional designation. The values associated with the natural settings of the roadless area, including scenic, old growth, and karst values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 508 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								7,367
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	6,907	6,907	6,907	6,907	6,907		6,907	
Semi-remote Recreation								
Recommended LUD II						7,367		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production	460	460	460	460	460		460	
TOTAL	**7,367**	**7,367**	**7,367**	**7,367**	**7,367**	**7,367**	**7,367**	**7,367**
Suitable Timber Lands	24	24	24	24	24	0	24	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Kogish (509)

ACRES (NFS): 71,420

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Kuiu-Prince of Wales Fjordlands, Prince of Wales Mountains

2003 WILDERNESS ATTRIBUTE RATING: 20 (23)

I. Overview and Description

(1) Location and Access: The Kogish Roadless Area is located on the west side of central Prince of Wales Island. On the southwest, west, and northwest, the roadless area is bounded by San Christoval Channel, the Gulf of Esquibel, Salt Lake Bay, Tonowek Bay, Nossuk Bay, and Kaguk Cove. Most of these marine areas are part of the West Coast Waterway along the west side of Prince of Wales Island. The State of Alaska owns land bordering the roadless area along the southern shore of Salt Lake Bay. The northern and much of the eastern borders consist of extensively roaded areas. The southern boundary follows Sealaska Corporation lands that are managed for timber production and a small portion of Shinaku Inlet.

Ketchikan, served by the Alaska Marine Highway and regular flights, is approximately 55 miles southeast of the area. The primary access is by way of the Staney Creek road system, from the north, and by boat or floatplane along the extensive saltwater shorelines. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes

(2) History: There is evidence of prehistoric and historic use of this roadless area, particularly along the saltwater shorelines. The Tlingit people, who have settled in Klawock and Craig, maintain strong connections with specific locations and general areas along the west coast of Prince of Wales Island (USDA Forest Service, 1998). Many specific areas along the southwest, west, and northwest shorelines of the roadless area were identified by local people as important for resource gathering and hunting, including Elevenmile, Salt Lake Bay, Nossuk Bay, and other nearby vicinities. A large number of prehistoric and historic sites were located in these areas, during cultural resource surveys conducted for the Control Lake Project (USDA Forest Service, 1998).

The roadless area was within the primary sale area for the Ketchikan Pulp Company long-term timber sale contract for many years and the northern edge of the area (especially the Staney Creek watershed) has been under intensive timber management. The Sealaska Corporation land along the southern border has also been developed for timber management. Two timber sales in the roadless area have been NEPA-cleared under the Control Lake Project (USDA Forest Service, 1998), but have not yet been sold.

(3) Geography and Topography: This majority of the area is characterized by gently rolling relief with locally rugged areas. Kogish Mountain, with an elevation of almost 3,000 feet, is the highest point in the roadless area. Shinaku Creek, and much of its watershed, exhibits fairly gentle relief, except in its upper reaches where the topography also becomes precipitous. It is the major drainage in the roadless area. There are 144 miles of saltwater shoreline. This area contains about 1,228 acres of alpine tundra, 123 acres of lakes, and 550 acres of rock. Islands and islets make up 4,589 acres of this roadless area, including the land on Heceta Island. Approximately 10 islands in this roadless area are over 50 acres.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the North Central Prince of Wales Island Biogeographic Province. This province is characterized by relatively gentle topography; limestone soils are fairly common and precipitation is relatively high. Karst development is limited due to the limited carbonate outcrops in this area.

Ecological Section/Subsection. The Kogish Roadless Area is contained within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F) and the Prince of Wales Mountains Ecological Section (M247I). These areas are represented by three ecological subsections (see table below). The Elevenmile Till Lowlands Ecological Subsection (50% of roadless area) contains sedimentary and volcanic bedrock that underlies compacted glacial till and peat of various thicknesses. Gently sloped mountains, rolling hills, and lowlands characterize the landscape. The mostly impermeable soils and gentle terrain support an expansive network of forested and non-forested wetlands that cover almost half of the land in this subsection. Hillslopes provide well-drained soils that can support productive hemlock forests. The Central Prince of Wales Volcanics Ecological Subsection (35% of roadless area) is mostly comprised of volcanic bedrock. The shallow, unproductive, and organic soils of the higher elevations support wetlands and forests of mixed-conifers and logdepole pines. The well-drained till soils of the lower elevations support moderate to highly-productive hemlock and hemlock-spruce forests which comprise more than half the landcover in this ecological subsection. The North Prince of Wales-Kuiu Carbonates Ecological Subsection (15% of roadless area) is characterized by low-elevation hills and mountain slopes underlain by limestone and marble karstlands. Hemlock and hemlock-spruce forests are found on karst soils, which can be highly productive (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kuiu-Prince of Wales Fjordlands	Elevenmile Till Lowlands	50%
	North Prince of Wales-Kuiu Carbonates	15%
Prince of Wales Mountains	Central Prince of Wales Volcanics	35%

(b) Soils: Soils are generally formed over bedrock and are typically about 40 inches deep. Some of the soils in the area are derived from limestone and marble.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with a large cedar component. Approximately 4,879 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 64,108 acres mapped as forestland, of which 29,497 acres (46 percent) are mapped as productive old-growth forest. Of the productive old growth, 14,024 acres (48 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 4,015 acres of high-volume, coarse-canopy old growth. There are also 498 acres of second growth resulting from older beach logging along Nossuk Bay, Tonowek Bay, and Kaguk Cove, and recent helicopter harvest in the eastern portion of the area.

(d) Fish Resources: The major fish producing waters are Staney Creek, Shaheen Creek, the streams of Salt Lake Bay, Elevenmile Creek, Big Salt Lake, and Shinaku Creek. The area also includes portions of the Staney Creek headwaters; Staney Creek is a major fish producer. These waters provide habitat for coho, pink, and chum salmon, steelhead trout, and Dolly Varden char (ADF&G, 2000).

(e) Wildlife Resources: Sitka black-tailed deer, black bear, wolves, marten, mink, river otter, and bald eagles are the best known species that inhabit the area. Marbled murrelet, Queen Charlotte goshawk, harlequin duck, Peale's peregrine falcon, osprey, and trumpeter swan also potentially occur in the area. Moose inhabit

Prince of Wales Island, but they have not been reported here. Brown bear and mountain goats do not inhabit this area (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to five different Land Use Designations (LUDs), under the 1997 Tongass Land and Resource Management Plan. These five LUDs are Timber Production, Modified Landscape, Scenic Viewshed, Semi-remote Recreation, and Old-growth Habitat.

LUD	Acres
Timber Production	37,665
Modified Landscape	3,862
Scenic Viewshed	1,190
Semi-remote Recreation	23,155
Old-growth Habitat	5,548

Approximately 60 percent of this area was allocated to LUDs that allow timber harvest and the associated road construction (Timber Production, Modified Landscape, Scenic Viewshed). Most of this area, approximately 53 percent, was allocated to the Timber Production LUD. Approximately 5 percent of the roadless area was allocated to the Modified Landscape LUD located around Kogish Mountain. The Scenic Viewshed LUD was allocated to approximately 2 percent of the roadless area located primarily in the east.

Approximately 40 percent of the roadless area was allocated to a non-development LUD (Semi-remote Recreation, Old-growth Habitat). Approximately 32 percent of the roadless area was allocated to the Semi-remote Recreation LUD located mostly in the western part. The Old-growth Habitat LUD was assigned to approximately 8 percent of the roadless area.

The roadless area was within the primary sale area for the Ketchikan Pulp Company long-term timber sale contract for many years and the northern edge of the area (especially the Staney Creek watershed) has been under intensive timber management. The Sealaska Corporation land along the southern border has also been extensively developed. Two timber sales in the roadless area have been NEPA-cleared under the Control Lake Project (USDA Forest Service, 1998), but have not yet been sold. These include the Kogish/Shinaku Sale, in the area around Kogish Mountain and upper Shinaku Creek, and the Pepper Sale, in the eastern lobe of the area near Control Lake. Another NEPA-cleared unit, not currently planned for sale, is in the vicinity of the Pepper Sale.

Recreation use in most of the area is not well documented. Use is perceived to be low due to very difficult access to the interior parts of this roadless area and the lack of major recreation attractions, such as major stream or lake systems. The saltwater shorelines receive recreational and subsistence use by boaters from Klawock and Craig and from people using the West Coast Waterway.

(6) Appearance (Apparent Naturalness): The appearance of most of the interior of the area is natural. However, extensive development has occurred adjacent to the north and much of the south sides of this area, and the northern portion of the area is affected by an irregular pattern of these developments.

(7) Surroundings (External Influences): The major external influences on most sides of this roadless area are ongoing timber management and development. Native corporation lands to the south, and National Forest System lands to the north have been extensively developed. Additional development has been NEPA-cleared inside the roadless area.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, the saltwater bays and inlets, and the opportunity to see wildlife may all be attractions. The fishing and solitude along some of the streams in the southwestern portion of the area and in the saltwater bays are attractions. The area contains 11 inventoried recreation places, which cover 12,221 acres (17 percent) of the roadless area. There are no improved trails with the area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The 2002 roadless area boundaries along the south and west sides are essentially the same as the 1989 boundaries. However, the 2003 boundaries along the north and east sides have been modified by ongoing timber management related developments, resulting in a

smaller roadless area relative to the 1989 version. Several smaller areas along the developed boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: Development has occurred extensively along the northern, eastern, and part of the southern boundary along private lands; however, the natural integrity and apparent naturalness of much of the area, particularly in the western portion and islands associated with the roadless area, is relatively high. The activities surrounding the area that are seen from the roadless area can have a major influence on the apparent naturalness of the area in the eastern half (particularly where developments penetrate the area) and along the Sealaska Corporation boundary. The overall natural integrity is high and the apparent naturalness is moderate. When rated separately, the eastern portion rates out with very high natural integrity and apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: Because of difficult access to interior areas, there is high opportunity for solitude and very high opportunity for primitive recreation within the area. However, near the boundaries of the area, one may occasionally hear the sounds of and see ongoing management activities from some vantage points. Along the saltwater shoreline, commercial fishing and recreational boats and floatplanes may be seen or heard at times.

The opportunities for primitive recreation are associated with the many isolated saltwater bays, anchorages, islands, and channels on the west side of this roadless area; however, the experience level is primarily semi-primitive motorized. The topography of the western portion of the area does not make travel particularly challenging, but topography becomes more challenging in the eastern half. Based on harvest data compiled from 1985 to 1994, VCUs 588 and 594, which cover most of the eastern portion of the area, were identified within the top 25 percent of black bear harvest areas on the Tongass (ADF&G, 1998). As with all backcountry areas on the Tongass, the opportunity for challenge and risk in this area is high. The climate, the rugged terrain, the isolation and distance from population centers with medical facilities, the barriers to communication, and the presence of large wild animals all contribute to the need for good preparation and knowledge of backcountry survival skills for anyone using this area. Hypothermia and bear encounters are just two examples of the many risks that must be considered before traveling in the backcountry of southeast Alaska.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	39,687	56%
Semi-Primitive Motorized (SPM)	10,643	15%
Roaded Natural (RN)	2,833	4%
Roaded Modified (RM)	18,167	25%

The area contains 11 inventoried recreation places, which cover 12,221 acres (17 percent) of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	2	3,744
SPM	8	7,701
RM	5	776

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

Because of fishing and other saltwater recreation opportunities and the proximity of the area to Klawock and Craig, the saltwater inlets and bays receive many visitors.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as

RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Kogish Roadless Area Roadless Area was 22 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 20. The difference in ratings is due to ongoing developments, especially on the eastern and northern portions of the roadless area. Because the western portion of the area (west of the Kogish Mountain/Shinaku Creek area) could be separated from the remaining, more highly affected area, a separate WARS score was calculated. The WARS rating for the western portion would increase to 23.

(4) Ecologic and Geologic Values:

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 588, 589, 590, 592, 593, 594, and 595, most of the roadless area, as primary salmon producers. VCUs 588, 589, 590 and 595 in the northern and eastern part of the area were also listed as primary sportfish producers.

The major fish producing waters in this area are Staney Creek, Shaheen Creek, the streams of Salt Lake Bay, Elevenmile Creek, Big Salt Lake and Shinaku Creek. These waters provide habitat for coho, pink, and chum salmon, steelhead trout, and Dolly Varden char (ADF&G, 2000). Information from the Control Lake EIS indicates that chinook salmon are found in the inlets and bays, but do not spawn in the streams here (USDA Forest Service, 1998). Upper Staney Creek, Shaheen Creek, and North Big Salt Lake have very good coho salmon capability. Shaheen Creek receives an estimated peak escapement of 62,200 pink salmon annually. Salt Lake Bay receives an estimated 88,900 pink salmon, while North Big Salt Lake receives 76,900 pink salmon. Elevenmile Creek receives an estimated 37,100 pink salmon and has good coho salmon capability (ADF&G, 1998).

(b) Wildlife Resources: Sitka black-tailed deer, black bear, wolves, marten, mink, river otter, and bald eagles are the best known species that inhabit the area. A number of bald eagle nest sites were documented along the coastline and inland along Elevenmile Creek (USDA Forest Service, 1998). There is good alpine habitat for ptarmigan. Marbled murrelet, Queen Charlotte goshawk, and harlequin duck potentially occur in the area. Peale's peregrine falcon, osprey, and trumpeter swan also occur on the island. Major concentrations of wintering trumpeter swans can be found at Big Salt Lake, just south of the area (USDA Forest Service, 1998). Moose inhabit Prince and of Wales Island, but they have not been reported here. Brown bear and mountain goats do not inhabit this area (MacDonald and Cook, 1999). Based on data compiled from 1985 to 1994, VCUs 588 and 594 in the center of the area, are listed among the top 25 percent of VCUs for black bear harvest (ADF&G, 1998).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. Peale's peregrine falcon, osprey, and trumpeter swan also

occur on the island. Major concentrations of wintering trumpeter swans can be found at Big Salt Lake, just south of the area (USDA Forest Service, 1998). In addition, nine sensitive plant species are known or suspected to occur in the Thorne Bay Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are few karst resources in this roadless area. Two areas of limestone with potential karst have been identified at the head of Nossuk Bay and the Peninsula to Point Swift. This represents 2,100 acres (3 percent) of the roadless area. All of the karst is mapped as low vulnerability. There are no glaciers or unique geologic features known within this area.

(5) Scientific and Educational Values: The richness of cultural sites along the saltwater shoreline of the area is of scientific and educational value. There are no other known special scientific or educational values within the area.

(6) Scenic Values: This area is within the Kupreanof Lowlands character type, which is characterized by predominantly low rolling relief, with elevations seldom greater than 1,500 feet. Numerous island groups and intricate waterways are also common in this character type. Much of this area is quite representative of the character type, though a major portion displays landscape features that have even less diversity and distinctiveness than is common in that character type. The natural landscape dominates views from the surrounding waterways (San Christoval , Tonowek Passage, and Karheen Passage), although this roadless area is surrounded by saltwater or developed areas.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: the small boat route from Karheen Passage to New Tokeen; the San Christoval Channel; and Karheen Passage saltwater use areas.

About 13 percent of this area has a high degree of landscape diversity and is inventoried as Variety Class A. About 51 percent of the area was inventoried as Variety Class B, possessing a degree of diversity common to the character type in which it is located. Another 35 percent of the area was rated as Variety Class C, possessing minimal landscape diversity. These more scenic areas are concentrated around the relatively rugged and diverse terrain of Kogish Mountain and Staney Cone. Other scenic features are the intricate shorelines and island groups in Salt Lake Bay and Nossuk Bay. Approximately 2 percent of the area was not inventoried for Variety Class type.

The Existing Visual Condition (EVC) of approximately 83 percent of the area is Type I, where the landscape has remained unaltered by human activity. The northern and eastern edges have been modified by developments. About 3 percent of this area was inventoried as EVC III, where the average person notices changes in the landscape, but they do not attract attention. Another 4 percent of the area was inventoried as EVC IV, where changes in the landscape are easily seen by visitors. Approximately 8 percent was inventoried as EVC V, where changes in the landscape are obvious to the average person, and appear to be major disturbances. Approximately 2 percent of the area was not inventoried for Variety Class type.

(7) Social, Cultural, and Historical Values: There is evidence of prehistoric and historic use of this roadless area, particularly along the saltwater shorelines. The Tlingit people, who have settled in Klawock and Craig, maintain strong connections with specific locations and general areas along the west coast of Prince of Wales Island (USDA Forest Service, 1998). Many specific areas along the southwest, west, and northwest shorelines of the roadless area were identified by local people as important for resource gathering and hunting, including the Elevenmile, Salt Lake Bay, Nossuk Bay, and other nearby vicinities. A large number of prehistoric and historic sites were located in these areas during cultural resource surveys conducted for the Control Lake Project (USDA Forest Service, 1998).

Available information indicates that substantial subsistence activities occur in the area, especially along the extensive saltwater shorelines of the area. The area is important to residents of Klawock and Craig, as well as other Prince of Wales Island communities. VCUs 588, 589, 592, and 593 were listed among the VCUs with the highest community fish and wildlife values. VCUs 591, 594, and 595 were listed in the second most important group. Only VCUs 590 in the northeastern part of the area and 559, islands off the west coast, were not listed in the top three groups for community use value. All the VCUs covering the area, except for VCU 590, were listed among those VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The western portion of the area generally has natural boundaries, with the exception of the northern boundary and the area bordering State lands on the south shore of Salt Lake Bay. As a result, its manageability as wilderness would be relatively high. However, the eastern half of the area, east of the Elevenmile Creek watershed, is narrow and the boundaries are generally unnatural, following developed areas and straight ownership lines. Therefore, this area would not be easily managed as wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Wildlife viewing, camping, hiking, sea kayaking, motor boating, hunting and exploring have the potential to increase as tourism and recreation increase throughout Alaska. Tourism potential is a major part of Alaska's economy. The industry attracts over 1.1 million visitors annually. There has been a growing recognition that tourism depends on scenic quality, wildlife, and wilderness (Behnke, 1999).

The rugged terrain and very difficult access into the eastern portion of this roadless area severely constrains its recreation potential for most users. Recognizing the small boat and kayak routes that pass through this area, the western and southern boundaries bordering saltwater, have potential for shelter sites and additional boat anchorages.

(2) Subsistence Uses: The major existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: The recently completed fish habitat inventory indicates that there is some potential for salmon enhancement projects, such as constructing fish passes, on several of the streams. The very difficult access limits capitalizing on this potential. No fisheries enhancement projects are planned in the area (USDA Forest Service, 1998).

(4) Wildlife Resources: No need has been identified for wildlife enhancement projects within this area.

(5) Timber Resources: There are 29,497 acres mapped as productive old growth in the roadless area. In addition, 498 acres are mapped as second-growth forest resulting from beach and helicopter logging. Of these acres, 25,819 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 8,090 acres or 11 percent of this roadless area are estimated to be suitable for timber production. Approximately 3,750 of the suitable acres are mapped as high-volume old growth; of these acres, 867 are mapped as high-volume, coarse-canopy old growth.

The roadless area was within the primary sale area for the Ketchikan Pulp Company long-term timber sale contract for many years and the northern edge of the area (especially the Staney Creek watershed) has been under intensive timber management. Two timber sales in the roadless area have been NEPA-cleared under the Control Lake Project (USDA Forest Service 1998), but have not yet been sold. These include the Kogish/Shinaku Sale in the area around Kogish Mountain and upper Shinaku Creek, and the Pepper Sale, in the eastern lobe of the area near Control Lake. Another NEPA-cleared unit, not currently planned for sale, is in the vicinity of the Pepper Sale. The western portion of the roadless area contains very limited commercial timber resources, except in the vicinity of Elevenmile Creek.

(6) Fire, Insects, and Disease: Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: Although no mineral exploration has taken place in this area, the geology of the area indicates some potential for discovery of valuable minerals. This area contains 748 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have low potential for development.

(8) Transportation and Utilities: There are existing roads adjacent to the area on the north, east, and south (on Sealaska Corporation land), which tie into the island road system. No transportation or utility corridors are planned for this area other than for the harvest of local timber.

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The mapped low vulnerability karst resources encompass approximately 2,100 acres or less than one percent of the roadless area.

(11) Land Use Authorizations: None.

(12) Land Status: This area includes all National Forest System lands. Sealaska Corporation lands border the area on the south and State lands border the area at Salt Lake Bay. A portion of the area, mostly in the Shinaku drainage, has been selected by Native Corporations but not conveyed to private lands.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The use of the area by local residents is primarily for subsistence and recreation uses along the coastline, and occasional hunting farther inland. Klawock and Craig residents are highly interested in the coastal subsistence resources and how the inland areas could affect them.

(b) Congressional Interest: Two bills from the U.S. House of Representatives included wilderness proposals for Southeast Alaska. In 1989, HR 987 did not include this area. In 2001, HR 2908 did not propose the area for wilderness, but did propose it to be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: A number of comments requested additional protection for the Elevenmile area (the western portion of the roadless area) because of fish, wildlife, recreation, subsistence, and cultural values. Other comments wanted the eastern portion of the area to remain in timber production.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: Many comments on the Control Lake EIS requested protection for the Elevenmile area (the western portion of the roadless area), especially because of its subsistence value and cultural resources. A citizen's group consisting of environmental organization representatives, independent timber operators, Alaska Natives, educators, business owners, and fishermen, most of which were residents of Prince of Wales Island, recommended no harvest or roads in this area.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Department of Fish and Game rated the Kogish roadless area (VCUs 589, 591, 592, 593, and 594) as the seventh highest priority for protection on Prince of Wales Island and Adjacent Islands. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 509 for permanent protection as LUD II. SEACC recommended this area for permanent protection through LUD II designation.

At the Craig Hearing, the President of the Craig Community Association stated "they really can't support any of the alternatives"

Some individuals commented in favor of wilderness protection for Eleven Mile.

(2) Nearby Roadless and Wilderness Areas and Uses: This roadless area is separated from the Thorne River and Karta Roadless Areas by a corridors of developed areas. The Karta Roadless Area surrounds the Karta Wilderness, which is approximately 5 miles southeast of the Kogish Roadless Area. Recreation and subsistence are the major uses for these adjacent areas. The use levels for these areas are generally low.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	55	160
Wrangell (Pop. 2,308)	60	110
Petersburg (Pop. 3,324)	70	115
Juneau (Pop. 30,711)	180	250

Hollis, located on Prince of Wales Island, currently is the nearest stop on the Alaska Marine Highway, and is about 35 road miles from the roadless area.

(4) Relative Contribution to the National Wilderness Preservation System: The Kogish Roadless Area is located on the west side of central Prince of Wales Island. On the southwest, west, and northwest, the roadless area is bounded by San Christoval Channel, the Gulf of Esquibel, Salt Lake Bay, Tonowek Bay, Nossuk Bay, and Kaguk Cove. The State of Alaska owns land bordering the roadless area along the southern shore of Salt Lake Bay. The northern and much of the eastern borders consist of extensively roaded areas. The southern boundary follows Sealaska Corporation lands that are managed for timber production and a small portion of Shinaku Inlet. This majority of the area is characterized by gently rolling relief with locally rugged areas. Kogish Mountain, with an elevation of almost 3,000 feet, is the highest point in the roadless area. Shinaku Creek, and much of its watershed, exhibits fairly gentle relief, except in its upper reaches where the topography also becomes precipitous. It is the major drainage in the roadless area.

The general area appears natural and unmodified; however, the eastern portion and northern boundary is heavily influenced by nearby developments. The overall natural integrity is high and the apparent naturalness is moderate. When rated separately, the western portion rates out with very high natural integrity and apparent naturalness. The opportunity for solitude is considered high and the opportunity for primitive recreation is very high.

Approximately 13 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The area associated with the western shoreline is rich in cultural history and the roadless area has a few areas of karst development.

The roadless area includes about 14,024 acres of high-volume, old-growth forest. Of these acres, approximately 4,015 are mapped as high-volume, coarse-canopy old growth.

The Kogish Roadless Area is classified as being in the North Central Prince of Wales Island Biogeographic Province and makes up about 5 percent of the province. It is 1 of 15 inventoried roadless areas found within the province which make up about 44 percent of the province. The Karta River Wilderness makes up about 3 percent of the province, and three designated LUD II areas (Mt. Calder-Mt. Holbrook, Pt. Baker-Pt. Protection, and Salmon Bay) make up about 5 percent of the province. A small portion of the roadless area is in the Southern Outer Islands Biogeographic Province; it makes up less than 2 percent of this province.

The Kogish Roadless Area lies within two ecological sections; it represents 5 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section and 3 percent of Prince of Wales Mountains Ecological Section. Both of these ecological sections contain relatively small areas in existing wilderness (13 and 8 percent, respectively) and existing

LUD II (8 and 3 percent, respectively), but are well represented by other existing non-development LUDs (33 and 22 percent, respectively).

Half (50 percent) of the roadless area is in the Elevenmile Till Lowlands Ecological Subsection; this portion of the roadless area represents 75 percent of the entire ecological subsection, 52 percent of which is protected by existing non-development LUDs; none is in wilderness or LUD II. Approximately 35 percent of the roadless area is in the Central Prince of Wales Volcanics Ecological Subsection; this portion of the roadless area represents 5 percent of the entire ecological subsection. Eight percent of this ecological subsection is located in existing wilderness and another 23 percent is protected by existing non-development LUDs. The balance (15 percent) of the roadless area is in the North Prince of Wales-Kuiu Carbonates Ecological Subsection; this portion of the roadless area represents 4 percent of the entire ecological subsection, 2 percent of which is in existing LUD II and 25 percent is protected by other existing non-development LUDs.

The Kogish Roadless Area was rated 20 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 53rd from the highest (along with 16 other roadless areas) among the 109 Tongass inventoried roadless areas. A separate rating was done for the western portion of the area, which resulted in a score of 23.

There is both local and national support for managing this area in an unroaded condition, especially the western portion that includes the Elevenmile shore and inland vicinities. There has been little support for designating the Kogish Roadless Area as wilderness. Designation would create a wilderness that would include the localized karst and the Elevenmile area, but it would also include areas heavily influenced by timber management related developments on private, State, and Federal lands. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Approximately 9 percent of the province is in existing wilderness or LUD II areas. Designation of the area would add long-term Congressional protection to about 75 percent of the Elevenmile Till Lowlands Ecological Subsection, which is not currently represented in wilderness or LUD II. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate. The western portion could make a moderate to high contribution.

V. Environmental Consequences

The Kogish Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 40 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 60 percent of the roadless area. The land in the development LUDs includes an estimated 8,090 acres that are suitable for timber production (5 percent of the suitable acres on the Thorne Bay Ranger District). Approximately 867 of the suitable acres are classified as high-volume, coarse-canopy old growth. Timber sales associated with the Control Lake FEIS would continue. This area contains an estimated 748 acres of undiscovered locatable mineral resources; all of these acres are considered to have low potential for development. Recreation and special uses would be ongoing. The values associated with the natural settings of the roadless area could be affected by ongoing development activities allowed by the Forest Plan. The cultural and most scenic and old growth values are protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. Ongoing recreation and special uses could continue, and timber harvest would not be allowed. Designation of the area would add long-term Congressional protection to about 75 percent of the Elevenmile Till Lowlands Ecological Subsection, which is not currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area, including cultural, old growth, and scenic values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Ongoing recreation and special uses would continue, but could be restricted. Timber harvest would not be allowed. Designation of the area would add long-term Congressional protection to about 75 percent of the Elevenmile Till Lowlands Ecological Subsection, which is not currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area, including cultural, old growth, and scenic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 509 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								71,420
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	5,548	5,548	5,548	5,548	5,548		5,548	
Semi-remote Recreation	23,155	23,155	23,155	23,155	23,155		23,155	
Recommended LUD II						71,420		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	1,190	1,190	1,190	1,190	1,190		1,190	
Modified Landscape	3,862	3,862	3,862	3,862	3,862		3,862	
Timber production	37,665	37,665	37,665	37,665	37,665		37,665	
TOTAL	**71,420**	**71,420**	**71,420**	**71,420**	**71,420**	**71,420**	**71,420**	**71,420**
Suitable Timber Lands	8,090	8,090	8,090	8,090	8,090	**0**	8,090	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Karta (510)

ACRES (NFS): 55,527

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Prince of Wales Mountains, Kupreanof Lowlands

2003 WILDERNESS ATTRIBUTE RATING: 19

I. Overview and Description

(1) Location and Access: The Karta Roadless Area is located in the center of Prince of Wales Island and at the west end of Kasaan Bay. It consists of several unconnected roadless sections surrounding the Karta River Wilderness. These sections are separated by roads and harvested areas or by the wilderness. The roadless area includes the Rio Roberts watershed, which is part of a mostly undeveloped, old-growth connection from Karta Wilderness to the Calder Holbrook LUD II on the northwest tip of Prince of Wales. The roadless area begins less than a mile north of Hollis, a stop on the Alaska Marine Highway. Ketchikan, the closest larger town, is approximately 40 miles southeast. Access to the roadless area is by boat or floatplane along Twelvemile Arm and Karta Bay, by floatplane to Control Lake and Black Bear Lake, and by roads to the north, west, and south boundaries. There are no places suitable for landing wheeled airplanes. Access away from roads and water is by foot or helicopter. There are two trails near the boundaries but these do not access the interior. There are Forest Service public use cabins located on Control Lake (near the edge of the roadless area) and Black Bear Lake.

(2) History: The roadless area drainage has a rich aboriginal cultural history. There are prehistoric village sites, rock art, and other physical indications of aboriginal occupancy of sites within the area. In more recent times, the roadless area has seen considerable mineral exploration and active mining. The Flagstaff Mine produced silver and gold during the 1920s. Trapping was a common activity from the late 1800's to the 1950's. Areas along the shore were beach logged, generally in the 1950s and 1960s. The center of the roadless area was designated a wilderness in 1990.

(3) Geography and Topography: The roadless area includes steep, rugged mountains, rising to over 3,000 feet in the south and west, and relatively flat areas near the western end of Kasaan Bay and in the north. The highest point is the 3,806-foot-high Pin Peak on the wilderness boundary. There are approximately 582 acres of lakes in this area, the largest of which is Black Bear Lake. There are 2,490 acres of alpine and 4,481 acres of rock. Shoreline on saltwater totals 27 miles, and small islands make up 480 acres of the roadless area.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the North Central Prince of Wales Island Province. All of the forest plant associations in Southeast Alaska except those that are found only on the mainland occur in this province. This area typically has high precipitation. This roadless area has more rugged topography than is typical for the province.

Ecological Section/Subsection**.** The Karta Roadless Area is contained within the Prince of Wales Mountains Ecological Section (M247I) and Kupreanof Lowlands Ecological Section (M247G). These areas are represented by two ecological subsections (see table below). The Central Prince of Wales Volcanics Ecological Subsection (92% of the roadless area) is mostly comprised of volcanic bedrock, though outcrops of dioritic and conglomerate rocks exist. The shallow, unproductive, and organic soils of the higher elevations support wetlands and forests of mixed-conifers and logdepole pines. The well-drained till soils of the lower elevations support moderate to highly-productive hemlock and hemlock-spruce forests which

comprise more than half the landcover in this ecological subsection. The Central Prince of Wales Till Lowlands Ecological Subsection (8 % of the roadless area) is characterized by gentle undulating terrain comprised of deep organic till that supports vast wetland complexes. Low productive forested wetlands cover almost half of the landscape and hemlock forests exist in the smaller portion of well-drained mineral soils on hillslopes (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Prince of Wales Mountains	Central Prince of Wales Volcanics	92%
Kupreanof Lowlands	Central Prince of Wales Till Lowlands	8%

(b) Soils: Soils are generally highly organic with low clay content and are formed over bedrock. Soil depth is typically about 40 inches. Generally, steeper areas have better-drained soils, and flat areas are poorly drained.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with large components of cedar. Approximately 402 acres of muskeg have been mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 44,794 acres mapped as forest land of which 19,863 acres or 44 percent are mapped as productive old-growth forest. Of the productive old growth, 10,521 acres or 53 percent are mapped as high-volume old-growth forest. The productive old growth includes about 3,426 acres of high-volume, coarse-canopy old growth. There are 973 acres of second growth associated with older beach logging primarily along the eastern coastline.

(d) Fish Resources: The primary fish-bearing waters in this area are Control Lake and Streams, Steelhead Creek, Rio Roberts Creek, Paul Young Creek, and Maybeso Creek. These waters provide habitat for coho, pink, chum, and sockeye salmon as well as for steelhead and cutthroat trout.

(e) Wildlife Resources: This area has large populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, loon, and common waterfowl. Moose are known to inhabit Prince of Wales Island. Brown bear and mountain goats do not inhabit this area (MacDonald and Cook, 1999). Bald eagle, marbled murrelet, Queen Charlotte goshawk, harlequin duck, Peale's peregrine falcon, osprey, and trumpeter swan may occur in the area.

(5) Management Direction and Current Uses: This roadless area was allocated to seven Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These seven LUDs are Timber Production, Modified Landscape, Experimental Forest, Scenic Viewshed, Old-growth Habitat, Semi-remote Recreation, and Municipal Watershed.

LUD	Acres
Timber Production	28,260
Modified Landscape	6,538
Experimental Forest	6,202
Scenic Viewshed	2,685
Old-growth Habitat	11,077
Semi-remote Recreation	391
Municipal Watershed	373

Most of this roadless area, approximately 79 percent, was allocated to a development LUD, which allows timber harvest and the associated road construction (Timber Production, Modified Landscape, Experimental Forest, and Scenic Viewshed). Approximately 51 percent of the roadless area was allocated to the Timber Production LUD. The Modified Landscape LUD was assigned to approximately 12 percent of the roadless area. Approximately 11

percent of the roadless area makes up the Maybeso Experimental Forest south of the Karta River Wilderness Area, which was allocated to the Experimental Forest LUD. The Scenic Viewshed LUD was assigned to approximately 5 percent of the roadless area.

Approximately 21 percent of the roadless area was allocated to a non-development LUD (Old-growth Habitat, Semi-remote Recreation, and Municipal Watershed). The Old-growth Habitat LUD was assigned to approximately 20 percent of the roadless area. Islands in Karta Bay were allocated to the Semi-remote Recreation LUD, which accounts for less than 1 percent of the roadless area. Less than 1 percent of the roadless area around Three Mile Creek was allocated to the Municipal Watershed LUD to service the Klawock community.

There are two hiking trails near the boundaries of the roadless area. There is a public recreation cabin at Black Bear Lake and another near the boundary of the roadless area at Control Lake. The Karta Roadless Area surrounds the Karta River Wilderness Area, which contains four public recreation cabins and hiking trails (approximately 5 miles). The roadless area is important for subsistence hunting and gathering to the communities of Hydaburg, Klawock, Thorne Bay, and Craig. Ketchikan residents use the area primarily for deer hunting. A small portion of VCU 576 is included in the roadless area. This VCU is rated among the VCUs with the highest community fish and wildlife values. None of the other VCUs in the roadless area are rated among the highest VCUs. No outfitter/guide permits were issued for the roadless area in 2,000. There are a trail and a fish ladder on Rio Roberts Creek just outside the roadless area. There are hydroelectric facilities at Black Bear Lake on the edge of the roadless area, and a new hydroelectric facility has been proposed for Wolf Lake within the southeastern portion of the area.

(6) Appearance (Apparent Naturalness): The roadless area is unmodified; however, the boundaries of the outer roadless area are dictated by timber harvest activities. The area is not contiguous. It consists of several unconnected roadless sections surrounding the Karta River Wilderness. These sections are separated by roads and harvested areas or by the wilderness. Adjacent harvest units have the potential to affect the apparent naturalness of portions of the roadless area, especially areas that are seen from the roadless area. The interior of the roadless area would take on naturalness the closer it comes to the exterior boundaries of the wilderness area.

(7) Surroundings (External Influences): Extensive private lands managed primarily for timber production to the west of the roadless area have been developed. National Forest System land to the north and south have also been developed. Major mountain ridges physically isolate some of the developed areas from portions of the roadless area. To the east is Kasaan Bay, the main ferry and water access route to Prince of Wales Island. It is this easy access route to the Karta River, along with the excellent fishing, that results in heavy public use of the Karta River Wilderness. One of the main reasons it gets a lot of use is that it is close to Ketchikan. Many people, especially out of state visitors, arrive by float plane. Ketchikan and Prince of Wales visitors get there by boat, skiff, or foot. This area has received lots of fishing/hunting use over the years and consequently has been developed with trails and cabins to support this use.

(8) Attractions and Features of Special Interest: The natural features of the area include the reflective qualities of the lakes with the backdrop of alpine reflections. The interconnected alpine/forest/stream/lake/river/estuary/saltwater nature of Karta Wilderness is a draw. The historic cabin on Salmon Lake is a one-of-a-kind structure on the National Historic Register. The trail system is of interest for the following three reasons: 1) it is a cross-island route (Kasaan Bay to Big Salt); 2) it led to an Alaska Native fish camp; and 3) it was an old mining road that turned into the current trail. The burn area along the Karta river (now not noticeable) may be the largest on Prince of Wales Island. The scenery, opportunity to fish and hunt wildlife, and the Karta Wilderness are all attractions. The roadless area includes a portion of the Maybeso Experimental Forest, one of only two Experimental Forests on the Tongass National Forest. The area contains 17 inventoried recreation places, which cover 10,134 acres, or 18 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of the roadless area changed in several ways between 1989 and 2003. First, 39,889 acres were designated as Karta River Wilderness Area in 1990 in the Tongass Timber Reform Act and are no longer included in the roadless area. This change fragmented the roadless area. Second, the 2003 roadless area boundary does not include land just northwest of Karta River Wilderness area because of ongoing development. Third, areas along the shore that were beach-logged decades ago but not roaded have been added to the roadless area. Trees have regrown in these areas, and they no longer appear modified. Also, more accurate mapping has resulted in changes to the boundary. Several smaller

areas along the developed boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the roadless area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: Lands within the roadless area appear natural and include a scenic backdrop of high mountain peaks. The evidence of early day mining is no longer a significant influence on the area's apparent naturalness. However, the extensive timber harvest activities and roading that nearly surround most of the roadless area potentially influence the outer portions of the area's natural integrity (especially activities that are viewed from the roadless area) and apparent naturalness. This surrounding activity makes this area, as a whole, less suitable for wilderness designation except as potential additions to the Karta River Wilderness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The alpine ridges that rim the Karta River basin generally provide relatively high opportunities for solitude and primitive recreation; however, during the peak season there is daily floatplane traffic transporting visitors in and out of the wilderness area, and this affects solitude in the Karta Roadless Area. Visitor use may spillover into the roadless area between June and September, due to the popularity of the adjacent Karta River Wilderness area. Also, traffic near the outer boundaries and ongoing management activities may disturb visitors at times. Primitive recreation opportunities that present challenging and adventurous experiences are abundant, especially along the steep, mountainous ridges that surround the Karta River Wilderness and Black Bear Lake.

As with all backcountry areas on the Tongass, the opportunity for challenge and risk in this area is high. The climate, the rugged terrain, the isolation, the distance from population centers with medical facilities, the barriers to communication, and the presence of large wild animals all contribute to the need for good preparation and knowledge of backcountry survival skills for anyone using this area. Hypothermia and bear encounters are just two examples of the many risks that must be considered before traveling in the backcountry of Southeast Alaska.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	1,178	2%
Semi-Primitive Non-Motorized (SPNM)	32,411	58%
Semi-Primitive Motorized (SPM)	2,426	4%
Roaded Natural (RN)	424	1%
Roaded Modified (RM)	19,022	34%

The area contains 17 inventoried recreation places, which cover 10,134 acres, or 18 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	1	1,130
SPNM	4	5,069
SPM	2	1,883
RN	3	362
RM	11	1,689

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are two hiking trails near the boundaries of the roadless area. There is a public recreation cabin at Black Bear Lake and another near the boundary of the roadless area at Control Lake.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of

wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Karta Roadless Area was 21 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this reevaluation, the area was given a rating of 19. The difference in rating reflects designation of the core of this earlier roadless area to the Karta River Wilderness and the influences of developments on remaining areas in the current roadless area.

(4) Ecologic and Geologic Values: The roadless area provides excellent fish and wildlife habitat. The roadless area nearly surrounds the Karta River Wilderness, making it a part of a larger unroaded area. Developed private and National Forest System lands separate the Karta Roadless Area and Karta River Wilderness from other inventoried roadless areas.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed four of the eight VCUs (595, 596, 597.2, and 622) as primary salmon and sportfish producers. In addition, VCUs 609 and 610 were listed as primary sportfish producers (ADF&G 1998).

The primary fish-bearing waters in the roadless area are Control Lake and Streams, Steelhead Creek, Rio Roberts Creek, Paul Young Creek, upper Maybeso Creek, and upper Harris River. These waters provide habitat for coho, pink, chum, and sockeye salmon as well as steelhead and cutthroat trout. Control Lake has a resident population of cutthroat and Dolly Varden (Recreation Cabin Website, 2001). Control Lake and Black Bear Creek contain steelhead trout and sockeye salmon. Resident rainbow trout have been introduced into Black Bear Lake (USFS, 1998). Steelhead Creek has an estimated peak escapement of 91,200 pink salmon and very good coho salmon production. Maybeso Creek receives an estimated 30,600 pink salmon, while also providing habitat for coho and chum salmon as well as steelhead trout (ADF&G 1998, 2000). Portions of Harris River within this roadless area have very good coho salmon production (ADF&G, 1998).

A fishpass was completed on Rio Roberts Creek in 1989. Large woody debris structures have been installed in Control Lake (USDA Forest Service, 1998).

(b) Wildlife Resources: This area has large populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, loon, and common waterfowl. Alpine areas are excellent ptarmigan habitat. Moose are known to inhabit Prince of Wales Island. Brown bear and mountain goats do not inhabit this area (MacDonald and Cook, 1999). Based on data compiled from 1985 to 1994, VCUs 609 and 622 in the center of the area are listed among the top 25 percent of VCUs for black bear harvest (ADF&G 1998).

Bald eagle nest sites have been located along the coastline and inland along Rio Roberts Creek. Marbled murrelet, Queen Charlotte goshawk, and harlequin duck may occur in the area. Peale's peregrine falcon, osprey, and trumpeter swans also occur on the island. A goshawk nest was found in the lower Rio Roberts drainage in 1995. An active Peale's peregrine falcon nest was recently discovered in the Steelhead Creek drainage (USDA Forest Service, 1998). Major concentrations of wintering trumpeter swans can be found at Control Lake.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the

Tongass. Major concentrations of wintering trumpeter swans can be found at Control Lake. Present from April through September, ospreys are rare in Southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. An active Peale's peregrine falcon nest was recently discovered in the Steelhead Creek drainage (USFS, 1998). Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. A goshawk nest was found in the lower Rio Roberts drainage in 1995. In addition, nine sensitive plant species are known or suspected to occur in the Thorne Bay Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are no glaciers or unique geologic features known in this area.

(5) Scientific and Educational Values: There are opportunities to study fish, wildlife, forests, and geologic processes within the roadless area. The roadless area includes the Maybeso Experimental Forest, one of only two experimental forests on the Tongass National Forest. The experimental forest contains permanent research plots designed to study hillslope erosion, movement of large woody debris in and through streams, forest regeneration, and response to thinning. The community of Hollis is 1 mile southeast of this area and is the closest town with school-age children. The closest larger city is Ketchikan, 40 miles east on the Alaska Marine Highway route.

(6) Scenic Values: This roadless area is part of the Coastal Hills character type which is characterized by moderately steep landforms, predominantly rounded summits, elevations ranging up to 4,500 feet, and flat-floored U-shaped valleys. Numerous island groups are also common in this character type. This area is, for the most part, quite representative of the Coastal Hills character type except for the very rugged and scenic terrain near the south and west boundaries that make up part of the Klawock Mountains. The reflective quality of the lakes is astounding with the backdrop of alpine reflections. The water on the lakes can be mirror-like at times and has been a destination for landscape photographers. The interconnected alpine/forest/stream/lake/river/estuary/saltwater nature of Karta Wilderness is a draw. Snow-capped peaks are often visible until July.

When viewing the roadless area from the priority routes listed in the Forest Plan, an unmodified landscape dominates. Once in the roadless area, visitors may see a landscape dominated by timber harvest and roads or an untouched scenic landscape, depending on the visitor's location. Significant landforms in this area include the Klawock Mountains and Pin Peak.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the roadless area include the Klawock-Control Lake and Control Lake to Thorne Bay highways; the Control Lake and Black Bear public recreation cabins; Karta Bay and Warm Chuck Inlet saltwater use areas; Kasaan Bay to Hollis, a part of the Alaska Marine Highway; and the community of Hollis.

About 7 percent of the area is inventoried as Variety Class A, which has a level of landscape diversity and scenic quality that is distinctive relative to the character type in which it is located. The very rugged rock forms of the Klawock Mountains are an example of the outstanding scenic features that make up the Variety Class A landscapes. There are also prominent waterforms including the variety of lakes and river and stream features. Approximately 93 percent is rated as Variety Class B, which possesses landscape characteristics common for the character type.

About 73 percent of the area has a Type I Existing Visual Condition (EVC); the natural landscape has remained unaltered by human activity. About 4 percent of the area has a Type III EVC; changes do not divert attention when noticed. The rest of the area has been moderately to heavily modified due to the logging and roading activity along the northern and southern boundaries. Approximately sixteen percent of the area has a Type IV EVC, indicating changes in the landscape are easily noticed by the average visitor, and may attract some attention. Places where changes to the landscape are obvious to the average visitor and appear to be major disturbances (EVC V) are present in 6 percent of this area.

(7) Social, Cultural, and Historical Values: The roadless area has a rich aboriginal cultural history. There are prehistoric village sites, rock art, and other physical indications of aboriginal occupancy of sites within the area. In more recent times, the roadless area has seen considerable mineral exploration and active mining. The Flagstaff Mine produced silver and gold during the 1920's. Trapping was a common activity from the late 1800's to the

1950's. Areas along the coast have been beached logged. There are two hiking trails near the boundaries of the roadless area. There is a public recreation cabin at Black Bear Lake and another near the boundary of the roadless area at Control Lake. The Karta Roadless Area surrounds the Karta River Wilderness Area, which contains four public recreation cabins and extensive hiking trails.

The roadless area is important for subsistence hunting and gathering to Alaska Native communities in Hydaburg, Klawock, and Craig. Other residents use the area primarily for deer hunting, fishing and winter sports (snow machining, snow boarding, and cross country skiing in the Klawock Mountains). Two VCUs in the western part of the area (VCUs 595 and 596) were listed in the third most important group of VCUs for high community use values. Most of the VCUs in this area (six of eight: VCUs 595, 598, 609, 610, 611, and 622) were listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G 1998). No outfitter/guide permits were issued for the roadless area in 2000. There is a fish ladder on Rio Roberts Creek. There are hydroelectric facilities at Black Bear Lake Hydro, and a new hydroelectric facility has been proposed for Wolf Lake.

(8) Manageability as Wilderness and Boundary Conditions/Changes: The boundary with the wilderness and the area along the eastern shore are based on topographic features. Other areas are based on private land boundaries or associated with developments rather than on topographic features. When Congress designated the Karta River watershed as wilderness in 1990, it selected the portion of the roadless area with boundaries based on well-defined topographic features. This is the area most easily managed as a wilderness. Adding the remaining roadless area to the wilderness would create more poorly defined boundaries. The relatively undeveloped old-growth corridor between the Karta Wilderness and the Calder Holbrook LUD II area on the northwest tip of Prince of Wales Island includes the Rio Roberts watershed, the Honker Divide area (Thorne River/Sweetwater Creek), and much of the Sarkar Roadless Area. It is relatively easy to manage in an unroaded condition, but marginal to manage as wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Wildlife viewing, camping, hiking, sea kayaking, fishing, hunting, and exploring have the potential to increase as tourism and recreation increase throughout Alaska. Tourism potential is a major part of Alaska's economy. The industry attracts over 1.1 million visitors annually. There has been a growing recognition that tourism depends on scenic quality, wildlife, and wilderness (Behnke, 1999). The roadless area is linked by road to Hollis, a stop on the Alaska Marine Highway. Easy access and the popularity of the nearby Karta River Wilderness is likely to draw tourists to the roadless area. There is a potential to construct an additional trail along Karta River Trail to Anderson Creek and beyond as well as trails from Rush Peak Road, Control Lake, Black Bear Lake and Rio Roberts Trail. There are also opportunities for alpine trails along the ridges within the Klawock Mountains and along Harris Ridge from the Hollis-Klawock Highway.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: No fish habitat enhancement projects are planned within the roadless area.

(4) Wildlife Resources: No wildlife habitat enhancement projects are planned within the roadless area.

(5) Timber Resources: There are 19,863 acres inventoried as productive old-growth forest and 973 acres as second-growth forest due to harvest in the roadless area. Of this, approximately 15,050 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 6,121 acres, or 11 percent of this roadless area, are estimated to be suitable for timber production. Approximately 3,074 of the suitable acres are mapped as high-volume old growth; of these acres, 695 are mapped as high-volume, coarse-canopy old growth.

Managing timber in most of the roadless area would require extending the existing road system into the roadless area. There are several harvest units and road segments in the north half of the roadless area that were approved by the Control Lake Timber Sales ROD.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: This area contains 3,742 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). In addition, this area contains 51,293 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 16,801 of these acres are considered to havemoderate to high potential for development.

The Salt Chuck and Brown and Rush Mines were active operations until the 1940s. Prince of Wales Island produced copper, gold, silver, and marble in economic quantities. It is not unrealistic that, with an improvement in mining economics, the Flagstaff Mine would reopen or other old claims would become viable mines. The USGS Mineral Resources Data website indicates that there are several prospects in the area for gold, copper, silver, lead, and zinc.

(8) Transportation and Utilities: There are no transportation corridors proposed in this roadless area. An existing State road corridor is located to the north, west, and south of this area. A new hydroelectric facility has been proposed for Wolf Lake near Hollis. Designation as a wilderness could conflict with plans to develop and manage hydroelectric projects.

(9) Water Availability and Use: There are two public recreation cabins that create a water demand from the roadless area. About 373 acres of this roadless area are dedicated to Municipal Watershed LUD. This LUD is managed to preserve the water quality for the community of Klawock. There is a hydroelectric plant at Black Bear Lake, and one is in the planning and permitting stages for Wolf Lake.

(10) Areas of Scientific Interest: There are opportunities to study fish, wildlife, forests, and geologic processes within the roadless area. The roadless area includes the Maybeso Experimental Forest, one of only two experimental forests on the Tongass National Forest. The experimental forest contains permanent research plots designed to study hillslope erosion, movement of large woody debris in and through streams, forest regeneration, and response to thinning. Designation of the experimental forest as a wilderness may not be compatible with some types of research, such as thinning or anti-erosion measures.

(11) Land Use Authorizations: There is a hydroelectric plant at Black Bear Lake, and one is in the planning and permitting stages for Wolf Lake.

(12) Land Status: The roadless area is all National Forest System lands. Two areas with encumbrances are within this roadless area; one is a large tract situated between land owned by the Sealaska Corporation and the Klawock-Heenga Village Corporation.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: There is substantial local interest in protecting subsistence and recreation resources.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. The Karta River portion of the roadless area was one of these areas. It was designated wilderness in 1991. In 2001, HR 2908 proposed managing all the portions of the roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: Many commenters recommended against additional roading and harvesting to protect watersheds, domestic water quality, subsistence, recreation, fish and wildlife habitat values, deer population, and/or scenic quality. Many other commenters recommended managing the area for timber. They were concerned about the local economy. Some commenters wanted the roads to remain open. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated on the Tongass National Forest. Others stated that all unroaded areas should be designated wilderness.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: The Southeast Alaska Conservation Council, the Control Lake Citizen's Coalition, Prince of Wales Conservation League, the Forest Service Employees for Environmental Ethics, Southeast Alaska Federal Subsistence Regional Advisory Council, and others stated that the area should be managed to protect its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. They recommended less roading and harvest but did not oppose all harvest. Others, including residents working in the timber industry, recommended more intensive harvest to support the local economy.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended this area for permanent protection through LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 510 for permanent protection as LUD II.

At the June 26 hearing in Thorne Bay, the President of the Organized Village of Kasaan stated that "…Alternative 1 is going to be the best right now." Later, in an August 15 Tribal Resolution, Kasaan requested that "…all customary and traditional use areas within the Tongass National Forest be recommended for long-term protection."

(2) Nearby Roadless and Wilderness Areas and Uses: This roadless area is approximately 1 to 2 miles northwest of the Soda Bay Roadless Area (505), 2 miles north of the Twelvemile Roadless Area (534), and 1 mile south of the Thorne River Roadless Area (511). It is separated from these roadless areas by developed areas. The closest wilderness is the Karta Wilderness, which is nearly surrounded by the roadless area. Recreation and subsistence are the major uses for these areas. Use levels for the Karta River Wilderness are high in the summer. Use levels for other roadless areas are generally low.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	40	45
Wrangell (Pop. 2,308)	60	110
Petersburg (Pop. 3,324)	75	130
Juneau (Pop. 30,711)	190	250

Hollis, located on the Prince of Wales Island, is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Karta Roadless Area is located in the center of Prince of Wales Island and at the west end of Kasaan Bay. It consists of several unconnected roadless sections surrounding the Karta River Wilderness. These sections are separated by roads and harvested areas or by the wilderness. The roadless area ranges from steep, rugged mountains, rising to over 3,000 feet in the south and west, to relatively flat areas near the western end of Kasaan Bay and in the north. There are several small lakes, the largest of which is Black Bear Lake.

The Karta Roadless Area appears natural and unmodified, especially near the wilderness, but is often influenced by developments adjacent to most of the other boundaries. The area has moderate natural integrity and apparent naturalness. The opportunity for solitude is high, and the opportunity for primitive recreation is very high.

Approximately 7 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The roadless area has sites with high cultural and historic values. The water from Black Bear Lake is used for hydroelectric generation for communities on Prince of Wales Island. A new hydroelectric facility is proposed for Wolf Lake near Hollis. A portion of the Maybeso Experimental Forest is located in the roadless area.

The roadless area includes about 10,521 acres of high-volume, old-growth forest. Of these acres, approximately 3,426 are mapped as high-volume, coarse-canopy old growth.

The Karta Roadless Area is classified as being in the North Central Prince of Wales Island Biogeographic Province and makes up about 4 percent of the province. It is one of 15 inventoried roadless areas found within the province, which make up about 44 percent of the province. The Karta River Wilderness makes up about 3 percent of the province, and three designated LUD II areas (Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and Salmon Bay) make up about 5 percent of the province.

The Karta Roadless Area lies within two ecological sections; it represents 6 percent of the Prince of Wales Mountains Ecological Section and 0.4 percent of Kupreanof Lowlands Ecological Section. Both of these ecological sections contain relatively small areas in existing wilderness (8 and 1 percent, respectively) and existing LUD II (3 and 1 percent, respectively), but are well represented by other existing non-development LUDs (22 and 33 percent, respectively).

The majority (92 percent) of the roadless area is in the Central Prince of Wales Volcanics Ecological Subsection; this portion of the roadless area represents 10 percent of the entire ecological subsection, 8 percent of which is located in existing wilderness and another 23 percent is protected by existing non-development LUDs. The remaining 8 percent of the roadless area is in the Central Prince of Wales Till Lowlands Ecological Subsection; this portion of the roadless area represents 2 percent of the entire ecological subsection. None of this ecological subsection is in existing wilderness, but 3 percent is in LUD II, and an additional 42 percent is protected by other existing non-development LUDs.

The Karta Roadless Area was rated 19 out of a possible 28 points under WARS. As such, its WARS rating is ranked 70th from the highest (along with 13 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the roadless area in an unroaded condition, but there is little support for designating the area as a wilderness. Designation would create a wilderness that adds area to the various boundaries of the Karta River Wilderness. The Karta River Wilderness was designed to have logical and relatively easy boundaries to manage, and the Karta Roadless Area includes the unroaded portions around the core that were not included in the wilderness. The wilderness additions would include areas heavily influenced by ongoing management and related activities including hydroelectric generation, experimental forest projects, and various sites with cultural and historic importance. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low to moderate.

V. Environmental Consequences

The Karta Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 21 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 79 percent of the roadless area. The land in the development LUDs includes an estimated 6,121 acres that are suitable for timber production (5 percent of the suitable acres on the Craig and Thorne Bay Ranger Districts). Approximately 695 of the suitable acres are classified as high-volume, coarse-canopy old growth. Ongoing timber sales authorized by the Control Lake FEIS would continue. This area contains 3,742 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains an estimated 51,293 acres of undiscovered locatable mineral resources; 16,801 of these acres are considered to have

moderate to high potential for development. The hydroelectric, experimental forest projects, timber sale projects, recreation, minerals, and special uses would continue. The values associated with the natural settings of the roadless area could be affected by ongoing activities allowed by the Forest Plan. The high cultural, historic, and most scenic and old growth values are protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to the Recommended LUD II. Timber harvest would not be allowed. The ongoing hydroelectric projects, experimental forest projects, recreational use, special uses, and mineral management that occur within the Recommended LUD II area could be restricted. The values associated with the natural settings of the roadless area, including cultural, historic, old growth, and scenic values, would be provided long-term protection if designated LUD II.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed, and the potential for other development, including recreation, mineral, and hydroelectric, would be significantly restricted. Mineral prospecting and development would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including cultural, historic, old growth, and scenic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 510 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								55,527
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed	373	373	373	373	373		373	
Old-growth Habitat	11,077	11,077	11,077	11,077	11,077		11,077	
Semi-remote Recreation	391	391	391	391	391		391	
Recommended LUD II						55,527		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest	6,202	6,202	6,202	6,202	6,202		6,202	
Scenic Viewshed	2,685	2,685	2,685	2,685	2,685		2,685	
Modified Landscape	6,538	6,538	6,538	6,538	6,538		6,538	
Timber production	28,260	28,260	28,260	28,260	28,260		28,260	
TOTAL	**55,527**	**55,527**	**55,527**	**55,527**	**55,527**	**55,527**	**55,527**	**55,527**
Suitable Timber Lands	6,121	6,121	6,121	6,121	6,121	**0**	6,121	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Thorne River (511)

ACRES (NFS): 74,362

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Prince of Wales Mountains and Kupreanof Lowlands

2003 WILDERNESS ATTRIBUTE RATING: 21 (22)

I. Overview and Description

(1) Location and Access: The Thorne River Roadless Area occurs in the center and east-central portion of Prince of Wales Island, approximately 5 miles northwest of Thorne Bay, and includes most of the Thorne River drainage. Ketchikan, with regular air and Alaska Marine Highway Service, is approximately 50 miles to the southeast. Most of the southern boundary is formed by State Highway 929 and Forest Road 30, connecting the communities of Thorne Bay and Craig, and much of the west side is bordered by Forest Road 20, the main road leading to the northern portion of Prince of Wales Island. These roads and other forest roads provide land access to all sides of the roadless area. The primary access to the interior of the roadless area is by floatplane. Two closed road systems, one north of the Thorne River and the other near Cutthroat Lakes south of the Thorne River, allow non-motorized access to the interior of the roadless area. An increasing means of access to the interior of the area is by canoe. The area includes the area commonly referred to as Honker Divide, which is also part of a relatively undeveloped old-growth corridor that extends from the Karta Wilderness through the Rio Roberts watershed, through Honker Divide, across the Sarkar Roadless Area, and into the Calder Holbrook LUD II area and the northwest tip of Prince of Wales Island. There are no places suitable for landing wheeled airplanes.

(2) History: There is evidence that this area has received prehistoric and historic use, particularly along the Thorne River. The Tlingit people, who settled in Klawock and Craig, probably used the area over time. At least one cultural site along the Thorne River, a prehistoric campsite, has been determined to be eligible for listing on the National Register of Historic Places (USDA Forest Service, 1998). Because of the high-value fish resources of the Thorne River, the prehistoric and historical use of this area was probably relatively high. Aboriginal cultures probably used the lower reaches of the Thorne River for subsistence use. In recent history, trapping has occurred in the Thorne River drainage. In the last 30 years there has been increasing interest in the freshwater fishing and canoeing throughout the water system. The Thorne River and Hatchery Creek combine to form a free-flowing river corridor running from north to south across the roadless area. The divide area along the headwaters of these streams is known as Honker Divide (the entire river corridor is referred to as Honker Divide at times).

The roadless area was within the primary sale area for the Ketchikan Pulp Company long-term timber sale contract for many years, and much of the area surrounding the roadless area has been under intensive timber management. Two proposed harvest units and approximately 1 mile of proposed road have been NEPA-approved (under the Control Lake Project), along with other units and roads outside the roadless area, as part of the Wolf Pup Timber Sale. This sale has been sold, but these units have not yet been harvested. In addition, three proposed helicopter harvest units in the southwest part of the area have been NEPA-approved (under the Control Lake Project), but have not yet been sold.

(3) Geography and Topography: There are three distinct topographic types within this roadless area. The larger is the broad, relatively flat area around the Honker Divide (the headwaters of Thorne River and Hatchery Creek) and the area further east around Logjam Creek. The second is the low relief, drumlin field along the lower Thorne River, where the vegetation, hydrology, and topography are controlled by drumlins. The third is the mountainous and very rugged terrain of the eastern half and the southwestern portion of the area.

The Thorne River and Hatchery Creek are the largest watersheds in the area and, together with several large lakes, form a river/lake corridor running north to south across the area. The large lakes include Lake Galea (also known as Honker Lake), Thorne Lake, and others. Elevations range from sea level to over 3,000 feet. There are 1,595 acres of alpine, 549 acres of rock, and 1,404 acres of fresh water lakes within this roadless area. The area has no saltwater shoreline, although the eastern boundary comes within 1 mile of saltwater.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the North Central Prince of Wales Island Biogeographic Province. This province is characterized by relatively gentle topography; limestone soils are fairly common, and precipitation is relatively low in much of the area due to interception by lands to the south and southwest. Karst topography and caves are often present.

Ecological Section/Subsection**.** The Thorne River Roadless Area is covered by two ecological sections: the Prince of Wales Mountains (M247I) and Kupreanof Lowlands (M247G) Ecological Sections. Each of these is represented by just one ecological subsection within the roadless area (see table below). The Central Prince of Wales Volcanics Ecological Subsection (57% of the roadless area) occupies most of the mountainous portions of the roadless area. At high elevations, soils are shallow over bedrock, often organic, and less productive. Well-drained, moderately to highly productive, glacial till soils predominate at lower elevations. Hemlock and hemlock-spruce forests occur on well-drained sites. The Central Prince of Wales Till Lowlands Ecological Subsection (43% of the roadless area) lies along the Thorne River and Hatchery Creek and in the northwest lowlands of the roadless area. It is represented by gently undulating terrain where continental ice lobes overrode Prince of Wales Island from the northeast. Organic soils formed over deep deposits of glacial till support vast wetland complexes. Shallow lakes and ponds pockmark an intermixture of forested and nonforested bogs and fens. Low productive forests are common on these poorly drained sites. A unique drumlin field occurs within the lower Thorne River drainage (a rare feature in the Alexander Archipelago) (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Prince of Wales Mountains	Central Prince of Wales Volcanics	57%
Kupreanof Lowlands	Central Prince of Wales Till Lowlands	43%

(b) Soils: These highly organic and low clay content soils are generally formed over bedrock and are about 40 inches deep. Some of the soils in the area are derived from limestone and marble.

(c) Vegetation: Vegetation in this area is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with a large cedar component. Approximately 1,829 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 66,890 acres mapped as forest land, of which 38,611 acres or 58 percent are mapped as productive old-growth forest. Of the productive old growth, 19,575 acres or 51 percent are mapped as high-volume old-growth forest. The productive old growth includes about 7,715 acres of high-volume, coarse-canopy old growth. There are extensive areas of second growth surrounding the area, but no acres within it.

(d) Fish Resources: The lakes and streams in this area provide good habitat for sockeye, coho, pink, and chum salmon, steelhead and cutthroat trout, and Dolly Varden char. The major fish-bearing waters in this area are the Thorne River and Lake, Hatchery Creek and Lake Galea, and Logjam Creek.

(e) Wildlife Resources: This area has large populations of Sitka black-tailed deer, in addition to black bear, wolves, otter, marten, mink, bald eagles, loon, great blue heron, and trumpeter swan. Osprey

have been sighted in the area. Marbled murrelets and goshawks are reported to nest here. Moose sign has been reported on Prince of Wales Island, but brown bear and mountain goats do not inhabit the island.

(5) Management Direction and Current Uses: This roadless area was allocated to six different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These six LUDs are Timber Production, Modified Landscape, Scenic Viewshed, Old-growth Habitat, Scenic River, and Research Natural Area.

LUD	Acres
Timber Production	8,318
Modified Landscape	7,145
Scenic Viewshed	3,937
Old-growth Habitat	41,381
Scenic River	11,960
Research Natural Area	1,621

Approximately 26 percent of the roadless area was allocated to a development LUD, which allows timber harvest and the associated road construction (Timber Production, Modified Landscape, and Scenic Viewshed). The Timber Production LUD was assigned to approximately 11 percent of the roadless area. Approximately 10 percent of this area was allocated to the Modified Landscape LUD. The Scenic Viewshed LUD was assigned to approximately 5 percent of the roadless area.

Approximately 74 percent of this area was allocated to a non-development LUD (Old-growth Habitat, Scenic River, and Research Natural Area). Much of this area, approximately 56 percent, was allocated to the Old-growth Habitat LUD. Along Thorne River and Lake, Lake Galea, and Hatchery Creek, approximately 16 percent of the roadless area was allocated to the Thorne River-Hatchery Creek Scenic River LUD. The Research Natural Area LUD was assigned to approximately 2 percent of the roadless area. This LUD is located in the Thorne River drainage and referred to as the Rio Roberts Research Natural Area.

The roadless area was within the primary sale area for the Ketchikan Pulp Company long-term timber sale contract for many years, and much of the area surrounding the roadless area has been under intensive timber management. Two proposed harvest units and approximately 1 mile of proposed road have been NEPA-approved (under the Control Lake Project), along with other units and roads outside the roadless area, as part of the Wolf Pup timber sale. This sale has been sold, but these units have not yet been harvested. In addition, three proposed helicopter units in the southwest part of the area have been NEPA-approved (under the Control Lake Project), but have not yet been sold. A small area of private land borders the area near Control Lake.

One public recreation use cabin is located at Lake Galea (Honker Lake). Another public recreation cabin at Control Lake and the 12-site Eagle's Nest Campground occur just outside the southern border of the roadless area. The Thorne River and Hatchery Creek combine to form a free-flowing river corridor running from north to south across the roadless area. The divide area along the headwaters of these streams is known as Honker Divide (the entire river corridor is referred to as Honker Divide at times). The trail/canoe system that follows the corridor, referred to as the Honker Divide Canoe Route, is frequently used and is considered unique in Southeast Alaska. Outfitting and guiding are becoming significant activities on the Thorne River system. In 2000, there were a total of seven freshwater fishing guides/outfitters (212 and 378 service days) and one black bear hunting guide (6 service days).

(6) Appearance (Apparent Naturalness): The area is unmodified except for one public recreation use cabin and a small trail system. Areas developed for timber management are adjacent to much of the area and penetrate into the area in several places. The Thorne River corridor (a.k.a. Honker Divide) is relatively free from human development and has a high scenic quality.

(7) Surroundings (External Influences): The Thorne River Roadless Area is bounded on the north, west, south, and east by developments. Several of these roads penetrate into the roadless area. The southern boundary is formed by a Forest Highway, which is one of the principal roads on Prince of Wales Island; and parts of the western boundary follow the major road leading to northern Prince of Wales Island.

(8) Attractions and Features of Special Interest: The natural features and attractions of the area include fisheries, wildlife, recreation, and high scenic value, especially along the Honker Divide Canoe Route. Wildlife is abundant throughout the area. The extensive opportunity to canoe within the area, particularly following the Honker Divide Canoe Route, is an outstanding attraction. The fishing and solitude, particularly along various segments of the Thorne River, are also major attractions. The area contains 19 inventoried recreation places, which cover 40,237 acres, or 54 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The 2003 roadless area boundaries have been substantially modified relative to the 1989 boundaries. The changes are primarily due to the additional developments around and within the roadless area. Some of these developed areas penetrate into the area. As a result, the area of the roadless site has been substantially reduced relative to the 1989 version. Several smaller areas along developed boundaries were excluded between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The natural integrity of this area is intact. It is unmodified except for one recreation use cabin (Honker Lake Cabin) and a small trail system. The Honker Divide Canoe Route is a natural tread track, resembling an animal trail. Developments surround much of the area and penetrate into it mostly from the south and southeast, affecting the natural integrity and apparent naturalness to some degree. The eastern lobes of the roadless area are relatively narrow, with a closer proximity to developed areas.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: Primitive recreation opportunities are abundant. Opportunities for solitude and serenity are high, especially along the Thorne River corridor and adjacent upland areas. The sights and sounds of management activities and vehicle traffic may be evident along the edges of the area. Opportunities for solitude are lower in the eastern lobes of the roadless area, but can be found a short distance from developed areas. Floatplanes are occasionally used to transport people to Honker Lake. People using this roadless area during the summer may encounter other recreation or subsistence users.

Due to the many lake- and stream-oriented recreation attractions and the remoteness of the area, the interior of the Thorne River Roadless Area offers good opportunities for primitive recreation including camping, fishing, canoeing, hiking, and exploring. This roadless area contains the Control Mountain, Cutthroat, Manty Mountain, and Ratz Mountain alpine areas, as well as areas of subalpine in the upper reaches of the Sale Creek and No Name Creek drainages. The Honker Divide is a particularly challenging route due to the difficulty of the two lengthy overland portages. The remoteness of inland portions of the area presents a challenging experience with the need for self-reliance.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	22,418	30%
Semi-Primitive Non-Motorized (SPNM)	40,911	55%
Roaded Natural (RN)	727	1%
Roaded Modified (RM)	10,306	14%

The area contains 19 inventoried recreation places, which cover 40,237 acres, or 54 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	5	11,097
SPNM	8	23,768
RN	3	462
RM	13	4,909

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

The roadless area has many lake- and stream-oriented recreation attractions, particularly associated with the trail/canoe system, referred to as the Honker Divide Canoe Route. Because of its length and values, including fisheries, wildlife, recreation, and scenery, and because it is possible to canoe and portage approximately 30 miles from one road system to another, the trail/canoe system is considered unique in Southeast Alaska. There is a public recreation cabin on Lake Galea (Honker Lake). Another public recreation cabin at Control Lake and the 12-site Eagle's Nest Campground occur just outside the southern border of the roadless area. Fishing is becoming increasingly popular in the Thorne River, and outfitting and guiding are becoming significant activities on the Thorne River system. In 2000, there were seven freshwater fishing guides/outfitters (212 and 378 service days) and one black bear hunting guide (6 service days).

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Thorne River Roadless Area Roadless Area was 22 out of 28 possible points. The 1989 rating was reevaluated for this updated version of the AMS. Based on this reevaluation, the area was given a rating of 21. The difference in ratings is due to additional developments into the area including the Cutthroat Lakes and Honker road systems. A separate rating was done for the area without the eastern portion, which produced a score of 22.

(4) Ecologic and Geologic Values:

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) lists VCUs 574, 575, 576, 577, 578, 580, 581, and 596 (most of the area) as primary sportfish producers. VCUs 575, 576, 578, 580, 596 and 597.1 are identified as primary salmon producers.

The lakes and streams in this area provide habitat for sockeye, coho, pink, and chum salmon, steelhead and cutthroat trout, and Dolly Varden char. The major fish-bearing waters in this area are Thorne River and Lake, Hatchery Creek and Lake Galea, and Logjam Creek. The headwaters for Logjam Creek provide habitat for coho salmon. Sockeye and coho salmon, steelhead and cutthroat trout, and Dolly Varden inhabit Hatchery Creek and Lake Galea. Thorne River provides habitat for sockeye, coho, pink, and chum salmon, steelhead and cutthroat trout, and Dolly Varden char (ADF&G, 2000). Thorne River receives an estimated peak escapement of 60,000 pink salmon annually (ADF&G, 1998). This river also has very good coho production and the largest steelhead run on Prince of Wales Island, averaging 650 fish annually (ADF&G, 1998; TLMP, 1997). ADF&G lists this system among the 19 "high quality" watersheds in Southeast Alaska for fisheries values.

(b) Wildlife Resources: This area has large populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, and bald eagles. The only known inland-nesting bald eagles in Southeast Alaska are located in the Thorne-Hatchery area (USDA Forest Service, 1997). ADF&G has reported

sightings of osprey in the area. There is an extensive wetland area, providing habitat for waterfowl, loons, great blue heron, and trumpeter swan. The Thorne River and lakes in the area are known resting places for migrating trumpeter swans. The Control Lake area is heavily used by nesting marbled murrelets. A marbled murrelet nest was located near Hatchery Creek in 1993. A goshawk nest and one fledged juvenile were found on Logjam Creek in 1993 and a nest was found in the Rio Roberts drainage, just south of the area (USDA Forest Service, 1998). A peregrine falcon nest was discovered in the Steelhead Creek drainage, also to the south of the area (USDA Forest Service, 1998). Moose sign has been reported on Prince of Wales Island, but brown bear and mountain goats do not inhabit this area (USDA Forest Service, 1993, 1997). Based on harvest data compiled from 1985 to 1995, one of the VCUs partially located in this area, VCU 581, was ranked in the second 25 percent of black bear harvest areas on the Tongass.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species in the Tongass are the humpback whale (endangered) and the Steller sea lion (threatened), both marine species. There is no marine habitat available in the Thorne River Roadless Area. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in Southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Goshawk nests were located in the area in the Logjam Creek drainage and within the Rio Roberts drainage, just south of the area, and a peregrine falcon nest was discovered in the Steelhead Creek drainage, also to the south of the area (USDA Forest Service, 1998). Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Thorne Bay Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are three small areas of karst developed in the hills southwest of Cutthroat Lake. Several small caves have been mapped in this area. The karst resources represent 592 acres, or less than 1 percent, of the roadless area. Approximately 20 percent of the karst is mapped as high vulnerability karst. The topography of the lower Thorne River is dominated by drumlins, which control the vegetation and hydrology of the area. There are no glaciers in the area.

(5) Scientific and Educational Values: The Rio Roberts Research Natural Area is located within the roadless area. The area contains riparian flood plain spruce stands, upland old growth, natural second-growth stands, and upland hemlock on drumlin fields (glacial features). Research Natural Areas provide opportunities for baseline monitoring of ecological processes and non-manipulative observation.

(6) Scenic Values: The northern half of this roadless area is part of the Kupreanof Lowlands character type, which is characterized by low, rolling relief with elevations seldom greater than 1,500 feet. The southern half is part of the Coastal Hills character type, which generally possesses steeper slopes and more massive landforms. The area exhibits the landscape characteristics of both character types, though not in a manner that corresponds to the character type boundaries. The western half along the Hatchery Creek and Thorne River is characterized by low, rolling relief, and the eastern half is made up of large blocky landforms with rounded to flat ridges. A scenic natural landscape dominates when viewing the Thorne River Roadless Area from waterways and land within or surrounding the area.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Thorne Bay to Sandy Beach Road (#30) and Control Lake to Thorne Bay Road (FH #9); the Thorne River/Hatchery Creek/Barnes Lake area, recommended as a Wild and Scenic River status; The Honker Canoe Route (Gold and Galligan Lagoon to Thorne Bay) dispersed recreation area; the community of Thorne Bay; the Honker Lake public recreation cabin; the Thorne River Bridge developed recreation site; and the Honker Divide canoe trail.

About 10 percent of the area is rated as Variety Class A and possesses a high degree of landscape diversity for the character type. Most of the area, 90 percent, is inventoried as Variety Class B and possesses a level of landscape diversity that is common to the character type. These more scenic Variety Class A areas are primarily around the Snakey Lakes, an intricate complex of narrow, winding freshwater bodies north of the main Thorne Lake drainage.

Other notable scenic areas include portions of the Thorne River and its many areas of grassy meadows and large stands of spruce.

About 83 percent of this roadless area is in a Type I Existing Visual Condition (EVC) where the natural landscape has remained unaltered by human activity. About 2 percent of the area is in EVC III, where changes in the landscape are noticed by the average person, but do not attract attention. EVC IV was inventoried for about 1 percent of the area, where alterations to the landscape are obvious but tend to blend with natural landscape features. Approximately 14 percent of the area is in a Type V EVC, where changes to the landscape are obvious to the average visitor due to the developed areas around its edge.

(7) Social, Cultural, and Historical Values: There is evidence that this large and varied roadless area has received prehistoric and historic use, particularly along the Thorne River. The Tlingit people, who settled in Klawock and Craig, probably used the area over time. At least one cultural site along the Thorne River, a prehistoric campsite, has been determined to be eligible for listing on the National Register of Historic Places (USDA Forest Service, 1998). Because of the high-value fish resources of the Thorne River, the prehistoric and historical use of this area was probably relatively high. Aboriginal cultures probably used the lower reaches of the Thorne River for subsistence use. In recent history, trapping has occurred in the Thorne River drainage. In the last 30 years, there has been increasing interest in the freshwater fishing and canoeing throughout the water system.

Available information indicates that substantial subsistence activities occur in the area. The area is important to residents of Thorne Bay, Klawock, and Craig, as well as other Prince of Wales Island communities. Almost all VCUs were listed among the VCUs in the three groups of highest community use value. VCUs 574, 575, 576, 577, 578, 588, and 597 were listed among the VCUs with the highest values, VCU 583 is in the second most important group, and VCUs 574, 581, and 596 are in the third most important group. In addition, most of the VCUs covering the area (not including the central VCUs 575, 576, 596 and 597.1) were listed among those VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The boundaries of the area are mostly directed by adjacent developed areas. Natural boundaries, such as ridge-lines, could be identified along portions of the area, but this would result in a substantially smaller area. All portions of the eastern lobes of the roadless area are within a mile or two of developments. The core of the area around the Thorne River-Hatchery Creek system could be more manageable as wilderness if the road to and beyond Cutthroat Lake and the road into the area immediately east of Thorne Lake were closed and rehabilitated, and these areas were incorporated into the wilderness, as well as not including the eastern portion of the roadless area. The relatively undeveloped old-growth corridor between the Karta Wilderness and the Calder Holbrook LUD II area on the northwest tip of Prince of Wales Island includes the Rio Roberts watershed, the Honker Divide area (Thorne River/Sweetwater Creek), and much of the Sarkar Roadless Area. It is relatively easy to manage in an unroaded condition, but marginal to manage as wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: The current management emphasis for the Thorne River, Honker Divide, and Snakey Lakes area is for primitive recreation. Future recreation planning for facility and trail development in this area has been minimal. The primary emphasis has been to manage the area for primitive recreation opportunities with no additional trail or facility development. The Thorne River Roadless Area has good potential for dispersed primitive recreation. The recreation potential of the area is focused on primitive, non-developed recreation opportunities. In 1996, the Alaska Visitor Association proposed a hut-to-hut canoe system for 25 people and a backcountry lodge/resort for 30 people in the Honker Divide area in their comments on the 1997 Tongass Land and Resource Management Plan.

The recreation and tourism potential of this area is high. Wildlife viewing, camping, hiking, canoeing, fishing, hunting and exploring have the potential to increase as tourism and recreation increase throughout Alaska. Tourism potential is a major part of Alaska's economy. The industry attracts over 1.1 million visitors annually. There has been a growing recognition that tourism depends on scenic quality, wildlife, and wilderness (Behnke, 1999).

(2) Subsistence Uses: The major existing patterns of subsistence activities in the area would not be affected by wilderness designation; however, floatplane landings in the lakes, motorboat use of the lakes and lower Thorne River, and ATV use of portions of the roadless area could be restricted by wilderness designation.

(3) Fish Resources: Inventories show that there are numerous opportunities for fish habitat improvement on several of the streams within the area. Almost all of this potential is in constructing fish passes around or over natural barriers so salmon can reach high-quality spawning habitat that is currently unavailable. The Forest Service currently has plans to install log drop structures in the North Thorne River for habitat improvement (USDA Forest Service, 1997).

(4) Wildlife Resources: There are no long-range plans to accomplish wildlife habitat improvement project work within this roadless area.

(5) Timber Resources: There are 38,611 acres mapped as productive old growth and no acres mapped as second growth due to harvest in the roadless area. Of these acres, 25,942 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 2,816 acres, or 4 percent, of this roadless area are estimated to be suitable for timber production. Approximately 1,607 of the suitable acres are mapped as high-volume old growth; of these acres, 381 are mapped as high-volume, coarse-canopy old growth.

The roadless area was within the primary sale area for the Ketchikan Pulp Company long-term timber sale contract for many years, and much of the area surrounding the roadless area has been under intensive timber management. Two proposed harvest units and approximately 1 mile of proposed road have been NEPA-approved (under the Control Lake Project), along with other units and roads outside the roadless area, as part of the Wolf Pup Timber Sale. This sale has been sold, but these units have not yet been harvested. In addition, three proposed helicopter units in the southwest part of the area have been NEPA-approved (under the Control Lake Project), but have not yet been sold.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: This area contains an estimated 9,140 acres of undiscovered locatable mineral resources (Brew et al 1990; USDA Forest Service, 1991). All of these acres are considered to have low potential for development.

(8) Transportation and Utilities: No transportation or utility corridors are planned for this area other than for the harvest of local timber. There are existing roads adjacent to the area on all sides, which tie into the island road system. A proposed state road corridor is located along Clarence Strait, just east of the roadless area.

(9) Water Availability and Use: The one public recreation cabin on Honker Lake creates the only water demand in the entire area. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The Rio Roberts Research Natural Area is located within the roadless area. Study within this area could be restricted by wilderness designation. The mapped karst resources encompass approximately 592 acres or less than one percent of the roadless area.

(11) Land Use Authorizations: Special Use Permits for outfitter and guide operations are ongoing.

(12) Land Status: All of the area is National Forest System land. A small area of private land borders the roadless area near Control Lake.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives significant local use for subsistence and recreation activities.

(b) Congressional Interest: Two bills from the U.S. House of Representatives included wilderness proposals for Southeast Alaska. In 1989, House of Representatives Bill HR 987 did not include this area. In 2001, HR 2908 did not propose the area for wilderness, but did propose it to be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: Many comments were received requesting the protection of the area's roadless recreation values and opportunities (including the popular canoe route), old-growth habitat, and fisheries. Many asked that the area have full ridge-to-ridge protection from further logging or roading along the entire canoe route. Some felt that the "outstandingly remarkable" recreation and scenic values were not being adequately recognized; others see Honker Divide as the last large uncut area on North Prince of Wales, with important wildlife habitat values. A few commenters felt that logging should continue in the area, most favoring some protection for the canoe route itself. The Alaska Visitor Association proposed a hut-to-hut canoe system for 25 people and a backcountry lodge/resort for 30 people in the Honker Divide area.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: Many comments on the Control Lake EIS centered on protecting the Honker Divide area from road building and logging. Some indicated it is one of the most significant issues on the Tongass. This issue was identified as important for scenic beauty, recreation, subsistence, wildlife, and fishery resources. A citizen's group consisting of environmental organization representatives, independent timber operators, Alaska Natives, educators, business owners, and fishermen, most of whom were residents of Prince of Wales Island, recommended no harvest or roads in this area.

(f) Public Input Expressed During Supplemental EIS Process: In comments relative to the 1997 Forest Plan, the Governor of Alaska recommended that logging and construction of logging roads be avoided in important public interest areas such as Honker Divide (most of RA# 511). This comment was reiterated by the Governor in scoping comments regarding the SEIS and in comments by the Division of Governmental Coordination on the Draft SEIS.

Alaska Department of Fish and Game recommended permanent roadless status for the Honker Divide area in their comments on the Draft SEIS. ADF&G rated the Thorne River roadless area (VCUs 574, 575, 576, 577, 578, and 597.1) as the highest priority for protection on Prince of Wales Island and Adjacent Islands. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

SEACC recommended this area for LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 511 for permanent protection as LUD II. Audubon Alaska recommended that Honker Divide should be protected from logging and road building. The Tongass Conservation Society indicated that protection of Honker and other areas on Prince of Wales Island was important to the survival of recreation and tourism on the island.

Many individuals commented that Honker Divide was a special place and needed to be protected because of its importance as a biological corridor, its recreation opportunities, and other values.

(2) Nearby Roadless and Wilderness Areas and Uses: This roadless area is immediately north of the Karta Roadless Area, but developed areas separate it from the Karta Roadless Area, which surrounds the Karta Wilderness (approximately 5 miles south of the Thorne River Roadless Area). The Thorne River Roadless Area is also adjacent to, but separated by developed areas from the Kogish, Sweetwater, and Ratz Roadless Areas. Recreation and subsistence are the major uses for these adjacent areas. Use levels are not well documented.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	50	60
Wrangell (Pop. 2,308)	40	50
Petersburg (Pop. 3,324)	65	80
Juneau (Pop. 30,711)	180	200

Hollis, located on Prince of Wales Island, currently is the nearest stop on the Alaska Marine Highway and is about 40 road miles away from the roadless area.

(4) Relative Contribution to the National Wilderness Preservation System: The Thorne River Roadless Area occurs in the center and east-central portion of Prince of Wales Island, approximately 5 miles northwest of Thorne Bay, and includes most of the Thorne River drainage. Most of the southern boundary is formed by State Highway 929 and Forest Road 30, and much of the west side is bordered by Forest Road 20. The Thorne River Roadless Area has three distinct topographic types: the larger is the broad, relatively flat area around the Honker Divide (the headwaters of Thorne River and Hatchery Creek) and the area further east around Logjam Creek; the second is the low relief, drumlin field along the lower Thorne River; and the third is the mountainous and rugged terrain of the eastern half and the southwestern portion of the area.

The Thorne River Roadless Area is mostly unmodified and appears natural. Roaded areas form all the boundaries and influence the area to some degree, especially in the eastern portion. The area has high natural integrity and apparent naturalness. Separating the eastern lobe out of the area would increase the natural integrity rating to very high. The opportunity for solitude is high, and the opportunity for primitive recreation is very high within the area.

Approximately 10 percent of the landscape is considered distinctive from a scenery standpoint. There are three small areas of karst developed in the hills southwest of Cutthroat Lake. The topography of the lower Thorne River is dominated by drumlins, which control the vegetation and hydrology of the area. The Thorne River connects a series of large lakes that are a special feature of the roadless area. The area is also important as a large block of old-growth habitat as part of the Forest-wide conservation strategy. The Rio Roberts Research Natural Area is included in the roadless area.

The roadless area includes about 19,575 acres of high-volume, old-growth forest. Of these acres, approximately 7,715 are mapped as high-volume, coarse-canopy old growth.

The Thorne River Roadless Area is classified as being in the North Central Prince of Wales Island Biogeographic Province and makes up about 5 percent of the province. It is one of 15 inventoried roadless areas found within the province, which make up about 44 percent of the province. The Karta River Wilderness makes up about 3 percent of the province, and three designated LUD II areas (Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and Salmon Bay) make up about 5 percent of the province.

The Thorne River Roadless Area lies within two ecological sections; it represents 5 percent of the Prince of Wales Mountains Ecological Section and 3 percent of the Kupreanof Lowlands Ecological Section. These ecological sections contain relatively low representation in existing wilderness (8 and 1 percent, respectively), but they are also

represented in LUD II (3 and 1 percent, respectively), and are well represented in other existing non-development LUDs (22 and 33 percent, respectively).

Approximately 57 percent of the roadless area is in the Central Prince of Wales Volcanics Ecological Subsection; this portion of the roadless area represents 9 percent of the entire ecological subsection. Approximately 8 percent of this ecological subsection is located in existing wilderness and another 23 percent is protected by other existing non-development LUDs. The remaining 43 percent of the roadless area is in the Central Prince of Wales Till Lowlands Ecological Subsection; this portion of the roadless area represents 13 percent of the entire ecological subsection. None of this ecological subsection is in existing wilderness, but 3 percent is in LUD II, and an additional 42 percent is protected by other existing non-development LUDs

The Thorne River Roadless Area was rated 21 out of a possible 28 points under WARS. As such, its WARS rating is ranked 47th from the highest (along with five other roadless areas) among the 109 Tongass inventoried roadless areas. A separate rating was done for the area without the eastern lobe which resulted in a score of 22.

There is much local and national support for managing the Thorne River Roadless Area in an unroaded condition. There is national support for designating the area as wilderness. Designation would create a wilderness that is relatively large and centrally located within the province, but easier to manage as unroaded than as wilderness. The degree of timber harvest in adjacent lands and on northern Prince of Wales Island adds importance to the old growth within the roadless area. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate.

V. Environmental Consequences

The Thorne River Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, or 4 is implemented. Approximately 74 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 26 percent of the roadless area. The land in the development LUDs includes an estimated 2,816 acres that are suitable for timber production (2 percent of the suitable acres on the Thorne Bay Ranger District). Approximately 381 if the suitable acres are classified as high-volume, coarse-canopy old growth. The timber sales authorized by the Control Lake FEIS would continue. This area contains an estimated 9,140 acres of undiscovered locatable mineral resources. All of these acres are considered to have low potential for development. The relatively heavy recreation and special use programs would continue. The values associated with the natural settings of the roadless area, including old growth values, are mostly protected by the Forest Plan. The exception is for the northeastern portion of the roadless area where ongoing developments are allowed by the Forest Plan.

Under Alternatives 5 or 7, a 61,027-acre portion of the Research Natural Area, Old-growth Habitat, and Wild/Scenic/Recreation River, Scenic Viewshed, Modified Landscape, and Timber Production LUDs would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed in the Recommended Wilderness LUD and identified suitable acres in the roadless area would be reduced to 996 acres. The ongoing recreational use, special uses, and mineral management that occur within the Recommended Wilderness LUD area could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the Honker Divide portion of the roadless area, including scenic, karst, old-growth forest, and ecologic values, would be provided long-term protection if designated wilderness.

Under Alternative 6, the entire area would be converted to Recommended LUD II LUD. Timber harvest would not be allowed. The ongoing recreational use, special uses, and mineral management could continue. The values associated with the natural settings of the roadless area, including scenic, karst, old-growth forest, and ecologic values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed. The ongoing recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including scenic, karst, old-growth forest, and ecologic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 511 (in acres)								
Land Use Designation	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 4**	**Alt 5**	**Alt 6**	**Alt 7**	**Alt 8**
Recommended Wilderness					61,027		61,027	74,362
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area	1,621	1,621	1,621	1,621				
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	41,381	41,381	41,381	41,381	4,625		4,625	
Semi-remote Recreation								
Recommended LUD II						74,362		
LUD II								
Wild, Scenic, Recreational River	11,960	11,960	11,960	11,960				
Experimental Forest								
Scenic Viewshed	3,937	3,937	3,937	3,937				
Modified Landscape	7,145	7,145	7,145	7,145	2,719		2,719	
Timber production	8,318	8,318	8,318	8,318	5,990		5,990	
TOTAL	**74,362**	**74,362**	**74,362**	**74,362**	**74,362**	**74,362**	**74,362**	**74,362**
Suitable Timber Lands	2,816	2,816	2,816	2,816	996	**0**	996	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Ratz (512)

ACRES (NFS): 6,414

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Prince of Wales Mountains

2003 WILDERNESS ATTRIBUTE RATING: 19

I. Overview and Description

(1) Location and Access: The Ratz Roadless Area is located on the east side of Prince of Wales Island, approximately 5 miles south of Coffman Cove and 15 miles north of Thorne Bay. Funding has been made available for an Inter-Island Ferry Terminal (IFA) that will provide service between Coffman Cove and Wrangell in 2003, providing closer access and potentially more visitors to this roadless area. Wrangell is approximately 40 air miles northeast of the area. Clarence Strait lies to the east and areas developed for timber management lie along the other boundaries. Access to the roadless area is by boat or floatplane through Ratz Harbor, by floatplane to a lake north of Baird Peak, or by foot from roads along the boundaries. There are no places suitable for landing wheeled airplanes but helicopters can access the interior. There are no developed trails in the roadless area. A potential trail in this roadless area has been identified in the Luck Lake EIS.

(2) History: It is likely that there has been some aboriginal use within the roadless area but this has not been confirmed through cultural resource investigations. Some early day hand logging occurred along the saltwater of Ratz Harbor, just south of the roadless area.

(3) Geography and Topography: The area is characterized by very rugged terrain except for the uplands west of Ratz Harbor, where the topography is flat and muskegs predominate. The highest elevation is 3,064 feet. There are 6 miles of shoreline on saltwater, 98 acres of alpine tundra and 55 acres of lakes in this area. There are no rock features, icefields, or glaciers mapped in the roadless area nor are there any islands along the coast.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the North Central Prince of Wales Island Province. All of the forest plant associations in Southeast Alaska except those that are found only on the mainland occur in this province. This area typically has high precipitation. This roadless area has more rugged topography than is typical for the province.

Ecological Section/Subsection**.** The Ratz Roadless Area is contained entirely within the Prince of Wales Mountains Ecological Section (M247I). This area is represented by one ecological subsection (see table below). The Central Prince of Wales Volcanics Ecological Subsection is mostly comprised of volcanic bedrock, though outcrops of dioritic and conglomerate rocks exist. The shallow, unproductive, and organic soils of the higher elevations support wetlands and forests of mixed-conifers and logdepole pines. The well-drained till soils of the lower elevations support moderate to highly-productive hemlock and hemlock-spruce forests which comprise more than half the landcover in this ecological subsection (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Prince of Wales Mountains	Central Prince of Wales Volcanics	100%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock. Soil is typically about 40 inches deep. Generally, steeper areas have better-drained soils and flat areas are poorly drained. Some of the soils on and near Baird Peak are derived from marble.

(c) Vegetation: Vegetation in this area is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with a large cedar component.

There are approximately 5,811 acres mapped as forest land of which 3,298 acres or 57 percent are mapped as productive old-growth forest. Of the productive old growth, 2,268 acres or 69 percent are mapped as high-volume old-growth forest. The productive old growth includes about 976 acres of high-volume, coarse-canopy old growth. There are no acres of second-growth forest where timber harvest has occurred in the past.

(d) Fish Resources: The Anadromous Waters Catalogue (ADF&G, 2000) does not identify any anadromous fish-bearing waters in this roadless area.

(e) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, wolves, and other animals and birds common to Prince of Wales Island. Migrating trumpeter swan and goshawks use the area. Moose inhabit Prince of Wales Island, but they have not been observed in this roadless area (USDA Forest Service, 1993). Brown bear and mountain goats do not inhabit the island (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to three Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These three are Modified Landscape, Transportation and Utility System (TUS), and Old-growth Habitat. The TUS LUD is a secondary LUD that overlays the other land uses.

LUD	Acres
Modified Landscape	4,930
Transportation and Utility System	NA
Old-growth Habitat	1,484

Approximately 77 percent of the roadless area (not including the TUS overlay) was allocated to one development LUD, Modified Landscape. In addition, the Forest Plan identified a Transportation and Utility System LUD overlay along the coastline and within the roadless area. This corridor emphasizes potential major public transportation systems.

Approximately 23 percent of the roadless area was allocated to one non-development LUD, Old-growth Habitat LUD. This LUD is located in the southeastern part of the roadless area.

There are no developed recreation facilities in the roadless areas. The area receives some dispersed recreation and subsistence use, primarily hunting and fishing. Neither of the VCUs in the roadless area are rated among the VCUs having the highest community fish and wildlife values (ADF&G 1998). In 2000, three outfitter guides operated in or near this roadless area, providing black bear hunting (13 service days) and freshwater fishing (48 service days).

(6) Appearance (Apparent Naturalness): This small roadless area is in a natural, unmodified condition having a high level of natural integrity. Developments near the boundaries have the potential to affect the appearance and apparent naturalness of adjacent areas.

(7) Surroundings (External Influences): Clarence Strait forms a natural boundary along the east side of the roadless area. Developed areas lie along the other boundaries.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, and the opportunity to see wildlife and to study the processes, which formed this country may all be attractions. Baird Peak and the coastline contribute to the scenic quality and are the primary features within the roadless area. The area contains four inventoried recreation places, which cover 4,410 acres, or 69 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: Minor changes in the boundary of the roadless area between 1989 and 2003 result from more accurate mapping and from road construction and logging near the boundaries. A small portion in the southeast corner was expected to have been developed in the Forest Plan Inventory but was not developed. This area has been added to the roadless area.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The roadless area is small and only the eastern boundary is based on a topographic feature, the shoreline. The other boundaries are the result of ongoing developments and are not well-defined. Although this roadless area is small it is currently in a natural, intact environment. Nearby road traffic and harvest activity influences the natural integrity and apparent naturalness of the roadless area and its suitability for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The opportunity for solitude within the area is moderate due to the area's relatively small size and the opportunity for primitive recreation is relatively high. Nearby management activities and road traffic may be heard especially along the north, south and western boundaries. Persons camping or hiking within the area are unlikely to encounter other persons; however, people camped or hiking near the boundaries may occasionally be disturbed by traffic. Due to the limited size of the area, the proximity of developments around all boundaries except for the eastern, coastal side, the potential for primitive recreation experiences decreases.

The rugged terrain, dense vegetation typical of southeast Alaska, and the presence of bears presents a degree of challenge and a need for woods skills and experience. In 2000, three outfitter/guides operated in or near this roadless area, providing black bear hunting and freshwater fishing trips.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	3,440	54%
Semi-Primitive Motorized (SPM)	1,860	29%
Roaded Modified (RM)	1,114	17%

The area contains four inventoried recreation places, which cover 4,410 acres, or 69 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	1	3,145
SPM	1	767
RM	4	498

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are no developed recreation facilities in the roadless areas.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of

this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Ratz Roadless Area was 20 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 19, which reflects the ongoing developments and activities near the area.

(4) Ecologic and Geologic Values: The intensely developed karst on the northeast face of Baird Peak, as well as forests and wildlife, may be of scientific interest. The Ratz Roadless Area is not part of a larger unroaded area, it is isolated from other inventoried roadless areas by the surrounding developed land.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed VCU 581, on the northern end of the area, as a primary sportfish producer. However, this VCU extends beyond the boundaries of the roadless area and these ratings do not necessarily apply to the roadless area itself. No VCUs were listed as primary salmon producers (ADF&G, 1998). The Anadromous Waters Catalogue (ADF&G, 2000) identifies no anadromous fish-bearing waters within this roadless area.

(b) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, wolves, and a scattering of other animals and birds common to Prince of Wales Island. Migrating trumpeter swan and goshawks may be present in the area. Wintering trumpeter swan have been seen at Ratz Harbor and Luck Lake (USFS, 1993). Moose inhabit Prince of Wales Island, but they have not been observed in this roadless area (USFS, 1993). Brown bear and mountain goats do not inhabit the island (MacDonald and Cook, 1999). Based on harvest data compiled from 1985 to 1995, VCU 581,only partially located in this area, was ranked in the second 25 percent of black bear harvest areas on the Tongass. The Baird Peak Old Growth Reserve serves as a wildlife corridor (USFS, 1993). The major beach fringe corridor east of Baird Peak remains intact (USFS, 2000).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. Goshawks have been seen within the roadless area. In addition, nine sensitive plant species are known or suspected to occur in the Thorne Bay Ranger District.

(d) Karst, Cave, and Other Geologic Resources: The northeast flank of Beard Peak is underlain by marble into which extensive karst systems have developed. There has been no formal karst and cave resource inventory of this karst area. The karst in the northeastern portion of the roadless area contains several small caves. This is mapped as approximately 6 acres of high vulnerability karst or less than 1 percent of the roadless area. There are no glaciers or unique geologic features known in this area.

(5) Scientific and Educational Values: The intensely developed karst on the northeast face of Baird Peak, as well as forests and wildlife, are of scientific interest. The closest schools are in Coffman Cove, 5 miles to the north and Thorne Bay, 15 miles to the south.

(6) Scenic Values: This roadless area is part of the Coastal Hills Character Type which is characterized by moderately steep landforms, predominantly rounded summits, elevations up to 4,500 feet and flat-floored, U-shaped valleys. Numerous island groups are also common in this character type. This relatively small roadless area primarily includes one steep-sided mountain and a long, rounded alpine ridge rising up from Clarence Strait.

A natural landscape dominates views from waterways and land surrounding the roadless area; however, the view from many points within the roadless area includes extensive areas with developments. The major scenic features are the diverse alpine terrain features and small lakes near the summit of Baird Peak. Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Clarence Strait, a part of the Alaska Marine Highway; Snakey Lakes and Eagle Creek dispersed recreation areas; and the Ratz Harbor boat anchorage.

Approximately 98 percent was inventoried as Variety Class B and possesses landscape diversity common to the character type. Approximately 2 percent of the area was not inventoried for Variety Class type.

About 60 percent of the area is in a Type I Existing Visual Condition (EVC) where the natural landscape has remained unaltered by human activity. Due to the developments around the periphery of this area, the rest of the area is a moderately to heavily altered visual condition. Approximately 9 percent of the area has an EVC III, where changes in the landscape are noticed by the average person, but they do not attract attention. About 10 percent of the area has an EVC IV, where alterations to the landscape are obvious but tend to blend with natural landscape features. About 19 percent of the area has an EVC V, where changes to the landscape are obvious to the average visitor and appear to be major disturbances. Approximately 2 percent of the area was not inventoried for EVC.

(7) Social, Cultural, and Historical Values: It is likely that there has been some aboriginal use within the roadless area but this has not been confirmed through cultural resource investigations. Some early day hand logging occurred along the saltwater of Ratz Harbor, just south of the roadless area. The area receives some dispersed recreation and subsistence use, primarily hunting and fishing. None of the three VCUs in the roadless area are rated among the VCUs having the highest community fish and wildlife values. However, VCU 583 was listed in the second most important group and VCU 581 was listed in the third most important group. All three VCUs were listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998). In 2000, three outfitter guides operated in or near this roadless area, including Black Bear Hunting (13 service days) and freshwater fishing (48 service days).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The developed areas form an irregular boundary. However, because of the overall geographically well-defined nature of the area, it can be managed as a wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Wildlife viewing, camping, hiking, canoeing, sea kayaking, fishing, hunting and exploring have the potential to increase as tourism and recreation increase throughout Alaska. Tourism potential is a major part of Alaska's economy. The industry attracts over 1.1 million visitors annually. There has been a growing recognition that tourism depends on scenic quality, wildlife, and wilderness (Behnke, 1999). The roadless area is linked by road to Hollis, a stop on the Alaska Marine Highway. Funding has been made available for an Inter-Island Ferry Authority (IFA) that will provide service between Coffman Cove and Wrangell in 2003, providing closer access and potentially more visitors to this roadless area. The road from Thorne Bay is being upgraded. Improved road access might encourage some of the tourists visiting the island to recreate in the roadless area. There is relatively low potential for developed recreation in the area; but there is a potential for alpine hiking trails extending from existing Forest roads to the various small alpine lakes in the area. The Luck Lake EIS identified a potential developed trail within the roadless area.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: No fisheries enhancement projects are planned for the roadless area.

(4) Wildlife Resources: No wildlife habitat improvement enhancement projects are planned for the roadless area.

(5) Timber Resources: There are 3,298 acres of productive old-growth forest and no acres of second-growth forest due to harvest mapped in the roadless area. Of this, approximately 1,914 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 812 acres or 13 percent of this roadless area are estimated to be suitable for timber production. Managing timber in most of the roadless area would require extending the existing road system into the roadless area. Approximately 530 of the suitable acres are mapped as high-volume old growth; of these acres, 302 are mapped as high-volume, coarse-canopy old growth.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There is a high risk of windthrow due to the exposure to Clarence Strait and prevailing wind patterns.

(7) Minerals: The potential for mineral development is low. This area contains 6,382 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have low potential for development.

(8) Transportation and Utilities: A potential transportation and utility corridor runs along the coastline in this area and was assigned to the Transportation and Utility System LUD in the 1997 Tongass Land and Resource Management Plan.

(9) Water Availability and Use: There are no public recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The intensely developed karst on the northeast face of Baird Peak, as well as forests and wildlife, are of scientific interest. There are approximately 6 acres of karst mapped in the roadless area or much less than one percent of the roadless area.

(11) Land Use Authorizations: Outfitter and guide permitted use is ongoing.

(12) Land Status: All of this area is National Forest System land.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Little interest has been expressed by local residents for the roadless area.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. The roadless area was not one of these areas. In 2001, HR 2908 proposed managing the roadless area as LUD II in an unroaded condition.

(d) Public Input During Forest Plan Revision and Appeals: The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated on the Tongass National Forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all of North Prince of Wales not designated as wilderness for timber.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless

Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless are available. See Luck Lake EIS.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended this area for permanent protection through LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) also recommended Roadless Area 512 for permanent protection as LUD II.

(2) Nearby Roadless and Wilderness Areas and Uses: This roadless area is approximately 8 miles southeast of the Sarkar Roadless Area (514) and 1 mile northeast of the Thorne River Roadless Area (511). It is separated from these roadless areas by developed areas. The closest wilderness is the Karta River Wilderness, approximately 13 miles to the south. Recreation and subsistence are the major uses for these areas.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	50	55
Wrangell (Pop. 2,308)	40	45
Petersburg (Pop. 3,324)	60	70
Juneau (Pop. 30,711)	175	190

Hollis, located on Prince of Wales Island, currently is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Ratz Roadless Area is located on the east side of Prince of Wales Island, approximately 5 miles south of Coffman Cove and 15 miles north of Thorne Bay. Clarence Strait lies to the east and areas developed for timber management lie along the other boundaries. The area is generally characterized by very rugged terrain. The highest elevation is 3,064 feet on Baird Peak, which includes areas of well developed karst.

The Ratz Roadless Area is small but unmodified and in a natural condition. The area has high natural integrity and apparent naturalness. The opportunity for solitude is moderate and the opportunity for primitive recreation is relatively high.

None of the landscape is classified as distinctive for the character type from a scenery standpoint. The karst on Baird Peak is a special feature of this roadless area. A potential road corridor runs along the coast in the roadless area.

The roadless area includes about 2,268 of high-volume, old-growth forest. Of these acres, approximately 976 are mapped as high-volume, coarse-canopy old growth.

The Ratz Roadless Area is classified as being in the North Central Prince of Wales Island Biogeographic Province and makes up less than 1 percent of the province. It is one of 15 inventoried roadless areas found within the province which make up about 44 percent of the province. The Karta River Wilderness makes up about 3 percent of the province, and three designated LUD II areas (Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and Salmon Bay) make up about 5 percent of the province.

The Ratz Roadless Area lies completely within the Prince of Wales Mountains Ecological Section and represents 1 percent of the ecological section. This ecological section contains relatively little existing wilderness (8 percent) or existing LUD II (3 percent), but is well represented in other existing non-development LUDs (22 percent).

The whole (100 percent) roadless area is in the Central Prince of Wales Volcanics Ecological Subsection; this portion represents 1 percent of the entire ecological subsection. Approximately 8 percent of this ecological

subsection is located in existing wilderness and another 23 percent is protected by other existing non-development LUDs.

The Ratz Roadless Area was rated 19 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 70th from the highest (along with 13 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the Ratz Roadless area in an unroaded condition, but there has been very little support for designating it as wilderness. Designation would create a small wilderness with a relatively small area of well developed karst. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. The wilderness would also include a potential road corridor that could connect the communities of Coffman Cove and Thorne Bay. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low.

V. Environmental Consequences

The Ratz Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 23 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 77 percent of the roadless area. The land in the development LUDs includes an estimated 812 acres that are suitable for timber production (less than 1 percent of the suitable acres on the Thorne Bay Ranger District). Approximately 302 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains an estimated 6,382 acres of undiscovered locatable mineral resources. All of these acres are considered to have low potential for development. Considerations for development of the potential road linkage between Coffman Cove and Thorne Bay could continue. Ongoing cave and karst investigations would continue, as would recreation and special uses. The values associated with the natural settings of the roadless area, including the karst, old growth, and scenic values, could be affected by ongoing developments allowed by the Forest Plan. The karst values and most old growth and scenic values are protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. Ongoing cave and karst investigation, special uses, and recreation would continue, and timber harvest would not be allowed. The values associated with the natural settings of the roadless area, including the karst, old growth, and scenic values, would be provided long-term protection if designated LUD II

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Ongoing cave and karst investigation, special uses, and recreation could be restricted, and timber harvest and road development would not be allowed. The values associated with the natural settings of the roadless area, including the karst, old growth, and scenic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 512 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								6,414
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	1,484	1,484	1,484	1,484	1,484		1,484	
Semi-remote Recreation								
Recommended LUD II						6,414		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	4,930	4,930	4,930	4,930	4,930		4,930	
Timber production								
TOTAL	**6,414**	**6,414**	**6,414**	**6,414**	**6,414**	**6,414**	**6,414**	**6,414**
Suitable Timber Lands	812	812	812	812	812	**0**	812	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Sarkar (514)

ACRES (NFS): 62,170

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Kupreanof Lowlands, Kuiu-Prince of Wales Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 23

I. Overview and Description

(1) Location and Access: The Sarkar Roadless Area is located on north central Prince of Wales Island, west of Kashevarof Passage and Clarence Strait. It is separated from El Capitan Passage on the west by Forest Road 20. The roadless area is bounded on all but the northeast side by areas developed for timber management. The east side is adjacent to salt water along Barnes Lake and Whale Passage. The roadless area is approximately 40 air miles southeast of Wrangell. The roadless area is accessed by boats and floatplanes via Whale Passage, Barnes Lake, Sarkar Lake, Upper Sarkar Lake, Finger Lake or Raven Lake, and saltwater on the eastern coast. Additional access is provided by the network of roads around the exterior, or by helicopter and foot travel. There are no places suitable for landing wheeled airplanes. There are two Forest Service recreation public use cabins; one located along the shore of Sarkar Lake (Sarkar Lake Cabin) and one at Barnes Lake, the Barnes Lake Cabin. There is a developed canoe trail, Sarkar Canoe Route that interconnects seven lakes within the area. Boardwalk trails have been constructed for portaging between lakes. Tent platforms have also been constructed for camping along the Sarkar Canoe Route. This area also contains Tunga and Tammy Lake. The Sarkar Roadless Area is part of a relatively undeveloped old-growth corridor that runs from the Karta Wilderness to the Calder Holbrook LUD II area on the northwest tip of Prince of Wales Island.

(2) History: The roadless area was used by Alaska Native peoples in prehistoric and historic times. It contains what may be one of the larger Native summer camps known. Two traditional-use Native sites near the roadless area have been conveyed to Native Corporations in accordance with the Alaska National Interest Lands Conservation Act (ANILCA). In the early 1900s, salteries were located on the west coast of this roadless area. Areas along Whale Passage, Barns Lake, and Kashevarof Passage have been beach logged. The Sarkar Lake chain has a long history of subsistence and recreation use. This same area is known for past and present use as a trappers route.

(3) Geography and Topography: The roadless area is characterized by low elevation, subdued topography, and low-lying muskeg systems. The maximum elevation is 2,000 feet. There are 90 miles of saltwater shoreline and numerous freshwater lakes totaling 2,489 acres. This area also contains 44 acres of rock. There are about 11,192 acres of acres of islands, the largest of which are Thorne Island and Stevenson Island. There are no alpine features, icefields, or glaciers mapped in the roadless area.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the North Central Prince of Wales Island Province. This province is characterized by gentle relief in the landscape. All of the forest plant associations found in Southeast Alaska except those found only on the mainland occur in this province. The roadless area typically has high precipitation. This province contains limited karst topography and few caves.

Ecological Section/Subsection**.** The Sarkar Roadless Area is contained within the Kupreanof Lowlands Ecological Section (M247G) and the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F). These

areas are represented by two ecological subsections (see table below). The Central Prince of Wales Till Lowlands Ecological Subsection, which covers 99 percent of the roadless area, is characterized by gentle undulating terrain comprised of deep organic till that supports vast wetland complexes. Low productive forested wetlands cover almost half of the landscape and hemlock forests exist in the smaller portion of well-drained mineral soils on hillslopes (Nowacki et al., 2001)
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Ecological Section	Ecological Subsection	Percent of Roadless Area
Kupreanof Lowlands	Central Prince of Wales Till Lowlands	99%
Kuiu-Prince of Wales Fjordlands	North Prince of Wales-Kuiu Carbonates	1%

(b) Soils: Soils are highly organic, of low clay content, and generally formed over bedrock. They are typically about 40 inches deep. Generally, steeper areas have better-drained soils and flat areas are poorly drained. Some of the soils in the area are derived from limestone.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with a large cedar component. There are numerous interspersed areas of muskeg vegetation with 1,601 acres that are mapped. Due to their small size and association with forested areas, accurate estimates are difficult.

There are approximately 57,232 acres mapped as forest land of which 30,407 acres or 53 percent are mapped as productive old-growth forest. Of the productive old growth, 10,365 acres or 34 percent are mapped as high-volume old-growth forest. The productive old growth includes about 2,006 acres of high-volume, coarse-canopy old growth. There are 1,377 acres of second growth resulting from older beach logging along the coast, including on the associated islands.

(d) Fish Resources: The lakes and streams in this area provide habitat for sockeye, coho, pink, and chum salmon, cutthroat and steelhead trout, and Dolly Varden char. The Anadromous Waters Catalogue (ADF&G, 2000) indicates the primary fish-bearing waters in this roadless area include Indian Creek, Barnes Lake, Galligan Creek, Mabel Creek, and Sarkar River and Lakes.

(e) Wildlife Resources: The roadless area has populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, loon, and waterfowl. Sarkar Lake is a wintering area for trumpeter swan. Moose inhabit Prince of Wales Island, but brown bear and mountain goats do not (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to eight different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These eight LUDs are Modified Landscape, Timber Production, Recreation River, Transportation and Utility Systems (TUS), Old-growth Habitat, Remote Recreation, Wild River, and Semi-remote Recreation. The TUS LUD is a secondary LUD that overlays the other land uses.

LUD	Acres
Modified Landscape	10,056
Timber Production	3,218
Transportation and Utility Systems	NA
Old-growth Habitat	19,997
Remote Recreation	15,834
Wild River	9,621
Recreational River	3,193
Semi-remote Recreation	252

Approximately 21 percent of the roadless area (not including the TUS LUD overlay) was allocated to a LUD that allows timber harvest or road construction (Modified Landscape, Timber Production). The Modified Landscape

LUD was assigned to approximately 16 percent of the roadless area. Approximately 5 percent of the roadless area was allocated to the Timber Production LUD. Also, a proposed state road corridor in the eastern part of the roadless area was assigned to the Transportation and Utility Systems LUD overlay.

Approximately 79 percent of this roadless area was allocated to non-development LUDs (Old-growth Habitat, Remote Recreation, Wild River, Recreation River, Semi-remote Recreation). The Old-growth Habitat LUD was assigned to approximately 32 percent of the roadless area. Approximately 25 percent of the roadless area was allocated to the Remote Recreation LUD. Near the Sarkar Lakes, approximately 16 percent of the roadless area was allocated to the Sarkar Lakes Wild River LUD. Near the Barnes Lake/Gold and Galligan Lagoon, approximately 5 percent of the roadless area was allocated to the Recreational River LUD. Mabel Island and other small islands adjacent to the shoreline were allocated to the Semi-remote Recreation LUD, which account for less than 1 percent of the roadless area.

There are two public recreation cabins one at Barnes Lake and the other at Sarkar Lake. There is one 15-mile developed canoe route providing outstanding canoeing opportunities with a constructed boardwalk trail for portaging between seven lakes and tent platforms for camping. The trailhead for the Canoe Route is located just off FDR 20 at Sarkar Lake. The trailhead contains a parking area, vault toilet, boat ramp and a small dock. Sarkar Lake is also used for skiffing, fishing, hunting, camping, hiking, and subsistence gathering. In 2000, four outfitter/guides were operating in this area; activities included freshwater fishing (34 service days) and canoeing (6 service days). VCUs 554, 571, 573, and 577 were rated among the VCUs having the highest community fish and wildlife values. Sarkar Lake (VCU 554) is an especially important subsistence use area.

(6) Appearance (Apparent Naturalness): The area is unmodified except for the two public recreation cabins, portages along the canoe route, and beach logged areas. Generally, most of the area is in a natural, unmodified environment containing stands of old-growth forest intermixed with muskeg and other wetlands. Trees in the beach logged units have regrown and these areas no longer appear modified.

(7) Surroundings (External Influences): The Sarkar Roadless Area is bounded on the north, west, south, and most of the east by extensive timber harvest areas. A segment of the eastern boundary is saltwater. Non-National Forest System land forms part of the boundary near Whales Pass and Lake Bay.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, the saltwater bays and inlets, abundant lakes, and the opportunity to see wildlife and to study the processes, which formed this country may all be attractions. The area has a rich cultural history that provides education and interpretive opportunities. The cabins and canoe trail are special features, which attract tourists and locals. The fishing, ease of access to this area, and solitude of the area are attractions. The area contains 14 inventoried recreation places, which cover 24,398 acres, or 39 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of the roadless area changed in several ways between 1989 and 2003. The area between Sweetwater Lake and Clarence Strait and along Whale Pass are no longer National Forest System lands and are no longer part of the roadless area. Lands along the north and south border of the 1989 boundary are no longer roadless because of ongoing development. Areas that were beach logged several decades ago along Whale Passage, Barns Lake, and Kashevarof Passage but were not roaded have been added to the roadless area. Trees in these beach logged units have regrown and these areas no longer appear modified. Several smaller areas along developed boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area appears natural except for the two public recreation cabins and the canoe portages. The natural integrity and apparent naturalness of this area is high. The roadless area is characterized by low elevation, subdued topography, and low-lying muskeg systems, which limit the visibility and sounds of traffic and activities within the Sarkar Roadless Area.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is high opportunity for solitude and very high opportunity for primitive recreation within the roadless area. Floatplanes and boats are used to transport people to the lakes and the public recreation cabins within the area. Skiffs are also used to fish the Gold & Galligan Lagoon. Visitors using these areas may be disturbed by these activities, which are generally seasonal. Persons using the Sarkar Lakes during the summer may encounter other recreation or subsistence users.

The Gold & Galligan waterway, including Indian Creek Rapids and Lake Bay, are extremely challenging. This area is subject to extreme tidal fluctuations. Tidal races and rapids form that are influenced by as much as 24-foot tide changes. Other challenges include navigating around Thorne and Stevenson Islands, which are known to be rocky and shallow with extreme riptides. Due to the type of landscape within the heart of the roadless area, few visually outstanding landmarks and multiple waterways, lakes, and wetlands, navigation can be extremely challenging. Additionally, the relatively large size of the area, and the presence of black bears present a degree of challenge to people hiking or camping in the roadless area.

There are excellent primitive recreation opportunities, particularly in the northern end of the Sarkar Lakes chain due to the remoteness and solitude of the area and to its outstanding canoeing, trail, fishing and camping opportunities. Public recreation cabins are located at Sarkar Lake and Barnes Lake. In 2000, four outfitter/guides were guiding freshwater fishing and canoeing trips.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	11,560	19%
Semi-Primitive Non-Motorized (SPNM)	33,664	54%
Semi-Primitive Motorized (SPM)	12,139	20%
Roaded Natural (RN)	184	0%
Roaded Modified (RM)	4,561	7%

The area contains 14 inventoried recreation places, which cover 24,398 acres, or 39 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	1	11,560
SPNM	3	5,322
SPM	7	6,371
RN	1	22
RM	8	1,124

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There is a public recreation cabin at Barnes Lake and another at Sarkar Lake. There is a canoe route with boardwalk trail portages that accesses the interior linking seven lakes from a trailhead along Road 20 near the southwest corner of the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in

support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Sarkar Roadless Area was 23 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was also given a rating of 23.

(4) Ecologic and Geologic Values: The roadless area contains several karst features and high-quality habitat for fish and wildlife.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 554.1 and 573 as primary salmon producers. VCUs 552, 554.1, 554.2, and 5730 were listed as primary sportfish producers.

The lakes and streams in this area provide habitat for sockeye, coho, pink, and chum salmon, cutthroat and steelhead trout, and Dolly Varden char. The Anadromous Waters Catalogue (ADF&G, 2000) indicates the primary fish-bearing waters in this area include Indian Creek, Barnes Lake, Galligan Creek, Mabel Creek, and Sarkar River and Lakes. Indian Creek and Barnes Lake, in the northeast portion of the roadless area, contain sockeye, coho, and pink salmon, steelhead and cutthroat trout, and Dolly Varden char. Mabel and Galligan Creeks provide habitat primarily for coho, pink, and chum salmon. Mabel Creek also provides habitat for steelhead and Dolly Varden. Sarkar Lakes include five major lakes. The system has populations of sockeye, pink, coho, and chum salmon, steelhead and cutthroat trout, and Dolly Varden char (ADF&G, 2000). The Sarkar River receives an estimated 24,200 pink salmon and has excellent coho production in VCU 5541 (ADF&G, 1998). The ADF&G lists this system among the 19 “high quality” watersheds in Southeast Alaska for fisheries values (TLMP, 1997).

The Tunga Inlet fish pass, (a combination steppass and weir/pool system), completed in 1986, lies outside the boundaries of the roadless area, but provides passage to fish spawning within the roadless area.

(b) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, loon, and common waterfowl. Sarkar Lake is a wintering area for trumpeter swan. Moose inhabit Prince of Wales Island, but brown bear and mountain goats do not (MacDonald and Cook, 1999). There are no large mammals on Stevenson Island (MacDonald and Cook, 1999). The Central Prince of Wales EIS (USFS, 1993) indicates that there is a major wildlife corridor at Neck Lake. Based on harvest data compiled from 1985 to 1995, VCU 551, Thorne Island, was ranked in the second 25 percent of black bear harvest areas on the Tongass (ADF&G 1998).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Trumpeter swans winter at Sarkar Lake. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. Goshawks and goshawk nests have been sighted on Thorne Island. In addition, nine sensitive plant species are known or suspected to occur in the Thorne Bay Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are small areas of karst in this roadless in the northwestern corner and along the western edge. The karst found in the northwestern corner is extremely well developed and at one time was evaluated as a potential Research Natural Area. This is one of the few low elevation karst watersheds on Prince of Wales Island in which there is not timber harvest. This represents 622 acres, or 1 percent of the roadless area. All of the karst is mapped as low vulnerability karst. There are no glaciers or unique geologic features in this area.

(5) Scientific and Educational Values: There are no known special features within the roadless area but there are opportunities to study forests, fish, wildlife, and karst. Sarkar Lakes support a significant run of sockeye salmon. This area is an over-wintering place for the trumpeter swan. This area receives relatively high recreation use. The low elevation karst without previous timber harvest may be of scientific interest.

(6) Scenic Values: The entire roadless area is part of the Kupreanof Lowlands character type which is characterized by predominantly low, rolling relief, and elevations seldom greater than 1,500 feet. Numerous island groups and intricate waterways are also common in this character type. This roadless area exhibits very gently rolling to almost flat landscapes. Though the landforms of the area are relatively featureless, the Sarkar Lakes area possesses a highly intricate and diverse network of freshwater channels, ponds, larger lakes, and islands. Sarkar lakes is a unique system of freshwater lakes that are easily navigable by canoe. This system provides excellent opportunities to view scenery and wildlife in a pristine setting. The intricate waterways reveal a diversity of foreground, middleground, and background views. The canoe portages enable the visitor to experience remote temperate rainforest and muskeg scenery from an easily traversable boardwalk. Overnight visits are easily made, by reserving the USDA Forest Service cabin on Sarkar Lake, or the tent platform on Upper Sarkar Lake (no reservation required).

The landscape appears natural when viewed from surrounding waterways and from within the roadless area. The major scenic feature is the intricate network of water bodies. Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Clarence Strait, a part of the Alaska Marine Highway; Barnes Lake (recommended for Recreation River) and Sarkar Lakes (recommended for Wild, Scenic, and Recreational River); the Whale Pass saltwater use area; the Sarkar Cove, Honker Canoe Route, and Gold and Galligan Lagoon dispersed recreation use areas; Sarkar Lake and Barnes Lake public recreation cabins; the Neck Lake Boat Launch; and the Whale Pass private Resort.

About 20 percent of the roadless area is inventoried as Variety Class A, possessing a high degree of landscape diversity relative to the character type. These landscapes include primarily the Sarkar Lakes and Gold and Galligan Lagoon areas. Half of the area, 48 percent, was inventoried as Variety Class B, possessing landscape diversity common in the character type. Due to the large areas of low, featureless terrain, the remaining 31 percent was rated as Variety Class C, possessing a low degree of landscape diversity.

About 81 percent of the area is in a Type I Existing Visual Condition where the natural landscape has remained unaltered by human activity. About 7 percent of the area has an EVC III, where the average person notices changes in the landscape, but it does not dominate the landscape. Land with an EVC IV is found in about 8 percent of this roadless area, in which alterations to the landscape are obvious but tend to blend with natural landscape features. Approximately 2 percent of the area was inventoried as EVC V, where changes to the landscape are obvious to the average visitor and appear to be major disturbances. About 1 percent of the area was not inventoried.

(7) Social, Cultural, and Historical Values: This roadless area was used by Native peoples in prehistoric and historic times. This area is important to the Kwaan Tlingit of Wrangell and the Heenya Kwaan Tlingit of Klawock. It contains what may be one of the larger Native summer camps known. Two traditional-use Alaska Native sites near the roadless area have been conveyed to Native Corporations in accordance with ANILCA. In the early 1900s, salteries were located on the west coast of this roadless area. Areas along Whale Passage, Barns Lake, and Kashevarof Passage have been beach logged. The Sarkar Lake chain has a long history of subsistence and recreation use. Very old corduroy trail segments are in evidence. This same area is known for past and present use as a trappers route. In year 2000, four outfitter/guides were operating in this area; activities include freshwater fishing (34 service days) and canoeing (6 service days). VCUs 554.2, and 573 were rated among the VCUs having the highest community fish and wildlife values. All VCUs except 553 and 554 to the west, were listed among the VUCs with highest sensitivity to disturbance of subsistence use areas (ADF&G 1998). Sarkar Lake (VCU 554) is an especially important subsistence use area.

(8) Manageability as Wilderness and Boundary Conditions/Changes: The existing boundaries are not based on topographic features, except for the shoreline in the northeast. There are opportunities to create better-defined boundaries by moving the boundary inward in some places. For example, the roadless area includes portions of the north shore of Sweetwater Lake but this area is nearly cutoff from the rest of the roadless area by roads and harvest. Moving the boundary to the Gold and Galligan Lagoon might create a more easily-managed

boundary. The relatively undeveloped old-growth corridor between the Karta Wilderness and the Calder Holbrook LUD II area on the northwest tip of Prince of Wales Island includes the Rio Roberts watershed, the Honker Divide area (Thorne River/Sweetwater Creek), and much of the Sarkar Roadless Area. It is relatively easy to manage in an unroaded condition, but marginal to manage as wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: The recreation and tourism potential of this area is high. Wildlife viewing, camping, hiking, canoeing, sea kayaking, fishing, hunting and exploring have the potential to increase as tourism and recreation increase throughout Alaska. Tourism is a major part of Alaska's economy. The industry attracts over 1.1 million visitors annually. There has been a growing recognition that tourism depends on scenic quality, wildlife, and wilderness (Behnke, 1999). Tourism has been increasing in Southeast Alaska and is expected to continue to increase.

The roadless area is linked by road to Hollis, a stop on the Alaska Marine Highway. Funding has been made available for a Inter-Island Ferry Authority (IFA) that will provide service between Coffman Cove and Wrangell in 2003, providing for potentially more visitors to this roadless area. It is near a private resort in Whale Pass. Good road access may encourage many of the tourists visiting the island to recreate in the roadless area. The area has good potential for low density, primitive recreation experiences. There is potential for additional trail construction or boardwalk portages to link Tunga and Tammy Lake to the Sarkar Canoe Route and with additional tent platforms for camping. The Alaska Visitors Association in 1996 proposed a hut-to-hut canoe system for 25 people and a back country resort for 100 people at Sarkar Lake.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: No fish habitat enhancement projects are currently planned within the roadless area.

(4) Wildlife Resources: No wildlife habitat enhancement projects are currently planned within the roadless area.

(5) Timber Resources: There are 30,407 acres mapped as productive old-growth forest and 1,377 acres mapped as second-growth forest due to beach harvesting in the roadless area. Of this, approximately 23,691 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 2,177 acres or 4 percent of this roadless area are estimated to be suitable for timber production. Approximately 492 of the suitable acres are mapped as high-volume old growth; of these acres, 68 are mapped as high-volume, coarse-canopy old growth.

Managing timber in most of the roadless area would require extending the existing road system into the roadless area. Portions of the roadless area would be difficult to road due to extensive lakes and wetlands. The Lab Bay project approved group selection timber harvest using helicopter yarding on Thorne Island; no roads would be built as part of this action.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: Currently, no mining or known prospecting is occurring within this roadless area. The area on the south side of Sarkar Cove has potential for minerals development (TLMP, 1997). The USGS Mineral Resources Data website (2001) indicates that there are several prospects in the area for molybdenum, copper, and zinc. This area contains an estimated 54,046 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have low potential for development.

(8) Transportation and Utilities: A proposed state road corridor passes through the eastern part of the roadless area that was assigned to the Transportation and Utility System LUD in the 1997 Tongass Land and

Resource Management Plan. This would connect Whale Pass with Coffman Cove. FSR 20 is being realigned, widened, and paved under contract. Construction is expected to start in 2003 and finish by 2007. A State transportation corridor, Road 20, follows the western boundary of the roadless area and another corridor lies to the south, connecting Road 20 with Coffman Cove. Funding has been approved for an Inter-Island Ferry Authority (IFA) that will provide service between Coffman Cove and Wrangell.

(9) Water Availability and Use: Water demand is created by the public recreation cabins within the area. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: Fish, wildlife, and karst resources within the roadless area may be of scientific interest. The mapped karst resources encompass approximately 622 acres or one percent of the roadless area.

(11) Land Use Authorizations: Outfitter and guide permitting is ongoing.

(12) Land Status: All of the roadless area is National Forest System land.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Local residents are primarily concerned with maintaining the area for recreation and subsistence use.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. The roadless area was not one of these areas. In 2001, HR 2908 proposed managing the entire roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The Southeast Alaska Conservation Council (SACC) stated that the area should be managed to preserve its integrity. They felt it merited special protection for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. The Juneau Convention and Visitors Bureau recommended protecting the high-quality sport fishing experience. The SACC, the Alaska Rainforest Campaign, the Narrows Conservation Coalition, and others recommended LUD II protection. Other commenters suggested that the area be preserved for recreation or as old growth, or that the Sarkar Lake area be designated as Wild and Scenic River. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated on the Tongass National Forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all of North Prince of Wales not designated as wilderness for timber. The Alaska Visitors Association in 1996 proposed a hut-to-hut canoe system for 25 people and a back country resort for 100 people at Sarkar Lake.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless are available.

(f) Public Input Expressed During Supplemental EIS Process: The Department of Transportation and Public Facilities noted that the discussion should cover the proposed road connecting Whale Pass and Coffman Cove.

Alaska Department of Fish and Game recommended permanent roadless status for the Honker Divide area in their comments on the Draft SEIS. ADF&G rated the Sarkar roadless area (VCUs 554.1, 553, 551, 552, and 573) as the second highest priority for protection on Prince of Wales Island and Adjacent Islands. This

rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 514 for permanent protection as LUD II. SEACC recommended this area be designated as LUD II.

A number of cave/karst experts and other individuals stated that the Sarkar Roadless Area contains a relatively small, but mostly intact karst basin, once considered for a Research Natural Area. They indicated that inclusion of this area would be a small but useful addition to karst protection on the Tongass.

Other individuals recommended Sarkar for long-term protection.

(2) Nearby Roadless and Wilderness Areas and Uses: This roadless area is approximately 8 miles south of the Salmon Bay Roadless Area (518), 2 miles southeast of the Kosciusko Roadless Area (515), 2 miles north of the Sweetwater Roadless Area (513), and 6 miles north of the Thorne River Roadless Area (511). It is separated from these roadless areas by areas that have been developed. The closest wilderness is the Karta Wilderness, approximately 24 miles to the south. Recreation and subsistence are the major uses for these areas. Use levels are generally low.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	65	70
Wrangell (Pop. 2,308)	40	45
Petersburg (Pop. 3,324)	50	55
Juneau (Pop. 30,711)	160	175

Hollis, located on Prince of Wales Island, currently is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Sarkar Roadless Area is located on north-central Prince of Wales Island, west of Kashevarof Passage and Clarence Strait. It is separated from El Capitan Passage on the west by Forest Road 20. The roadless area is bounded on all but the northeast side by areas developed for timber management. The east side is adjacent to salt water along Barnes Lake and Whale Passage. The area is characterized by low elevation, subdued topography, and low-lying muskeg systems. The maximum elevation is 2,000 feet. There are 21 miles of saltwater shoreline and numerous freshwater lakes totaling 5,316 acres.

The Sarkar Roadless Area is natural appearing and mostly unmodified. The area has very high natural integrity and apparent naturalness. The opportunity for solitude is high and the opportunity for primitive recreation is very high.

The area has moderate to high scenic quality; approximately 20 percent of the landscape is classified as distinctive for the character type from a scenery standpoint. The area has several small parcels of karst and a system of larger lakes linked together with very high fisheries and recreational values.

The roadless area includes about 10,365 acres of high-volume, old-growth forest. Of these acres, approximately 2,006 are mapped as high-volume, coarse-canopy old growth.

The Sarkar Roadless Area is classified as being in the North Central Prince of Wales Island Biogeographic Province and makes up about 4 percent of the province. It is one of 15 inventoried roadless areas found within the province, which make up about 44 percent of the province. The Karta River Wilderness makes up about 3 percent of the

province, and three designated LUD II areas (Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and Salmon Bay) make up about 5 percent of the province.

The Sarkar Roadless Area lies within two ecological sections; it represents 6 percent of the Kupreanof Lowlands Ecological Section and 0.1 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section. Both of these ecological sections contain relatively small areas in existing wilderness (1 and 13 percent, respectively) and existing LUD II (1 and 8 percent, respectively), but are well represented by other existing non-development LUDs (33 percent, each).

The vast majority (99 percent) of the roadless area is in the Central Prince of Wales Till Lowlands Ecological Subsection; this portion of the roadless area represents 25 percent of the entire ecological subsection. None of this ecological subsection is in existing wilderness, but 3 percent is in LUD II, and an additional 42 percent is protected by other existing non-development LUDs. The remaining 1 percent of the roadless area is in the North Prince of Wales-Kuiu Carbonates Ecological Subsection; this portion of the roadless area represents 0.3 percent of the entire ecological subsection, 2 percent of which is in existing LUD II and 25 percent is protected by other existing non-development LUDs.

The Sarkar Roadless Area was rated 23 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 30th from the highest (along with 7 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the roadless area in an unroaded condition, and some support for designating the area as a wilderness. Designation would create a wilderness with a large system of inter-linked lakes with very high fisheries and recreation values. The degree of timber harvest in adjacent lands on northern Prince of Wales Island adds importance to the old growth within the roadless area. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate to high.

V. Environmental Consequences

The Sarkar Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, or 4 is implemented. Approximately 79 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 21 percent of the roadless area. The land in the development LUDs includes an estimated 2,177 acres that are suitable for timber production (2 percent of the suitable acres on the Thorne Bay Ranger District). Approximately 68 acres of those suitable lands are classified as high-volume, coarse-canopy old growth. This area contains an estimated 54,046 acres of undiscovered locatable mineral resources; all of these acres are considered to have low potential for development. The relatively heavy recreation and special use programs would continue. The values associated with the natural settings of the roadless area are mostly protected by the Forest Plan. The values could be affected in those areas that allow timber management activities. The karst, fisheries, recreation and most old growth and scenic values are protected by the Forest Plan.

Under Alternative 5 or 7, a 24,765-acre portion of the Remote Recreation and Wild/Scenic/Recreational River LUDs would be converted to Recommended Wilderness. This would not affect timber management because this area is currently allocated to a non-development LUD. The area suitable for timber production would not change from Alternative 1. The ongoing recreational use, special uses, and mineral management could be restricted within the Recommended Wilderness LUD. Mineral prospecting would be allowed in Recommended Wilderness up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the Sarkar Lakes portion of the roadless area, including the scenic, karst, fisheries, old growth, and recreation values, would be provided long-term protection if designated wilderness.

Under Alternative 6, the entire area would be converted to Recommended LUD II. Timber harvest would not be allowed. The ongoing recreational use, special uses, and mineral management could be restricted. The values associated with the natural settings of the roadless area, including the scenic, karst, fisheries, old growth, and recreation values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed. The ongoing recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic, karst, fisheries, old growth, and recreation values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 514 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness					24,765		24,765	62,170
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation	15,834	15,834	15,834	15,834	41		41	
Enacted Municipal Watershed								
Old-growth Habitat	19,997	19,997	19,997	19,997	19,991		19,991	
Semi-remote Recreation	252	252	252	252	252		252	
Recommended LUD II						62,170		
LUD II								
Wild, Scenic, Recreational River	12,814	12,814	12,814	12,814	3,848		3,848	
Experimental Forest								
Scenic Viewshed								
Modified Landscape	10,056	10,056	10,056	10,056	10,056		10,056	
Timber production	3,218	3,218	3,218	3,218	3,217		3,217	
TOTAL	**62,170**	**62,170**	**62,170**	**62,170**	**62,170**	**62,170**	**62,170**	**62,170**
Suitable Timber Lands	2,177	2,177	2,177	2,177	2,177	**0**	2,177	**0**

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Kosciusko (515)

ACRES (NFS): 71,578

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Kuiu-Prince of Wales Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 24

I. Overview and Description

(1) Location and Access: The Kosciusko Roadless Area is on Kosciusko Island, near the northwest end of Prince of Wales Island. It is approximately 45 air miles from Hollis, currently the closest stop on the Alaska Marine Highway. A second ferry port in Coffman Cove should be operational in 2003. Areas developed for timber management have been minimal within the majority of this roadless area, but has occurred just beyond the boundary of the roadless area, particularly in the Trout Creek drainage on Kosciusco Island and on Prince of Wales, across from El Capitan Passage. Sumner Strait and Shipley Bay lie to the northwest, El Capitan Passage to the east, and Davidson Inlet and Tokeen Bay to the south. The roadless area also includes several islands between Davidson Inlet and Tokeen Bay. Access to this island is by boat and by floatplane. There are no places suitable for landing wheeled airplanes. Once on the island, several roads extend to near the boundary of the roadless area. Access away from water and roads is by helicopter or foot. One developed trail and one Forest Service cabin are located in Shipley Bay. The trail is in poor condition.

(2) History: The coastal area was used by prehistoric and historic Native cultures. The permanent Tlingit village of Shakan was located adjacent to this area. Many traditional use sites and seasonal camps used out of Shakan are located here. Karst development in the area (caves), elevate the area to high sensitivity for cultural resources. The west coast area is known to have been used by the Russians for trading with the Natives. There is some evidence of early day hand-logging along several of the sheltered bays. Marble mining occurred in the Dry Pass area early in the last century. Marble mining on nearby Marble Island is ongoing. Approximately 60 per cent of the roadless area was designated LUD II by Congress in the 1990 Tongass Timber Reform Act.

(3) Geography and Topography: This area is within the low mountain arc of the Pacific Mountain system. A number of peaks in the roadless area range in elevation from 2,300 to over 3,100 feet. Numerous small streams drain to saltwater and to the several freshwater lakes within this roadless area. Shipley Lake is the largest freshwater lake. The highlands surrounding Mount Francis and the coastal area adjacent to Sumner Strait and Shipley Bay are underlain by limestone into which extensive karst systems have developed. The density of karst features and the level of development are similar to that of Bald Mountain within the Christoval Roadless Area (508). Karst has also developed along the ridgetop in the extreme northeastern corner of the area and on the islands to the south. There are 645 acres of lakes, 193 miles of shoreline on saltwater, 3,085 acres of alpine tundra, and 443 acres of rock. This area contains 6,187 acres of islands and islets. Six of these islands are over 100 acres and two are over 1,000 acres.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the North Central Prince of Wales Island Biogeographic Province. This province is characterized by rolling, gentle landforms but with localized rugged topography. Karst topography underlies approximately 9 percent of the roadless area; the ecological effects of the karst processes are especially noticeable in the Trout Creek watershed. Limestone is common and overall forest productivity is high. Karst topography and caves are present. Precipitation is relatively low due to interception by lands to the south and southwest.

Ecological Section/Subsection. The Kosciusko Roadless Area is contained entirely within Kuiu-Prince of Wales Fjordlands Ecological Section (247F). This area is represented by three ecological subsections (see table below). The Kuiu-Prince of Wales Granitics Ecological Subsection (47% of roadless area) contains rugged mountaintops of igneous rock that rise above rounded peaks, capturing incoming precipitation which remains as snowpack much of the year. Moderately productive hemlock forests are found below the alpine. The North Prince of Wales Complex Ecological Subsection (41% of roadless area) is characterized by rolling hills and wide U-shaped valleys underlain by non-carbonate conglomerate and granodioritic rocks. Productive hemlock and hemlock-spruce forests comprise about two thirds of the landscape, and the remainder is low productive mixed-conifer and lodgepole pine forested wetlands. The North Prince of Wales-Kuiu Carbonates Ecological Subsection is characterized by low-elevation hills and mountain slopes underlain by limestone and marble karstlands. Hemlock and hemlock-spruce forests are found on karst soils, which can be highly productive (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kuiu-Prince of Wales Fjordlands	Kuiu-Prince of Wales Granitics	47%
	North Prince of Wales Complex	41%
	North Prince of Wales-Kuiu Carbonates	11%

(b) Soils: Soils are generally formed over bedrock and are typically about 40 inches deep. Generally, steeper areas have better-drained soils and flat areas are poorly drained. Some of the soils in the area are derived from limestone.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce, with large components of cedar. There are numerous interspersed areas of muskeg vegetative. Approximately 1,791 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Areas above 2,000 feet support alpine vegetation and approximately 3,085 acres of alpine vegetation are mapped for the area.

There are approximately 64,580 acres mapped as forest land of which 40,810 acres or 63 percent are mapped as productive old-growth forest. Of the productive old growth, 22,576 acres or 55 percent are mapped as high-volume old-growth forest. The productive old growth includes about 9,364 acres of high-volume, coarse-canopy old growth. There are 716 acres of second growth associated with older beach logging.

(d) Fish-Resource: Coho, pink, chum, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char inhabit the lakes and streams in this area. The major fish-bearing waters identified by the Anadromous Waters Catalogue (ADF&G, 2000) include Trout Creek, Shipley Bay Creeks and Lake, Tokeen Bay Creeks, and Davidson Inlet Creeks.

(e) Wildlife Resources: Sitka black-tailed deer, black bear, wolves, mink, and bald eagles are among the species that inhabit the area. There is good alpine habitat for ptarmigan. Moose inhabit Prince of Wales and Kosciusko Islands (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to five different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These five LUDs are Timber Production, Modified Landscape, LUD II, Old-growth Habitat, and Semi-remote Recreation.

LUD	Acres
Timber Production	16,264
Modified Landscape	832
LUD II	43,265
Old-growth Habitat	8,025
Semi-remote Recreation	3,191

Approximately 24 percent of the roadless area was allocated to development LUDs, which allow timber harvest and the associated road construction (Timber Production, Modified Landscape). The Timber Production LUD was assigned to approximately 23 percent of the roadless area. Both sides of Marble Pass were allocated to the Modified Landscape LUD, which accounts for approximately 1 percent of the roadless area.

Approximately 76 percent of this roadless area was allocated to a non-development LUD (LUD II, Old-growth Habitat, Semi-remote Recreation). Most of this area, approximately 60 percent, was allocated to the LUD II designation. This LUD creates the Mount Calder/ Mount Holbrook LUD II area, which is one of the 12 areas that were allocated to permanent LUD II status under the Tongass Timber Reform Act of 1990. Approximately 11 percent of the roadless area was allocated to the Old-growth Habitat LUD. Groups of islands between El Capitan Passage and Tokeen Bay were allocated to the Semi-remote Recreation LUD, which account for 4 percent of the roadless area.

Recreation use is not well documented except for use occurring at the Shipley Bay Cabin. NRRS reports show that Shipley Bay Cabin received 76 visitors in FY 2001. Hiking and sea kayaking occur within the area. Whale watching and wildlife viewing opportunities are abundant. No outfitter/guide permits were issued for the roadless area during 2000. In 1996, the Alaska Visitor Association (AVA) proposed an overnight wildlife observatory for 50 people and a backcountry recreation lodge for 50 people along the El Capitan Passage. The roadless area receives some subsistence use, primarily in Shakan Bay; however, none of the VCUs in the roadless area are listed among the VCUs with the highest community fish and wildlife values. The Shakan molybdenite prospect, associated known molybdenum-copper deposits near the old town site of Shakan, and the El Cap gold prospect adjacent to Tokhini Creek (north of Devilfish Bay) show promise for mineral development within the roadless area.

(6) Appearance (Apparent Naturalness): This area has a high scenic quality that is dominated by the mountain geography of Mt. Francis, the Nipples, and Mt. Holbrook, and by coastal scenery at Shipley Bay, Devilfish Bay and the surrounding Island. Shipley Lake, steep alpine areas, and vast lowland muskeg areas also add to scenic quality. The area is unmodified except for the recreation cabin on Shipley Bay and some older beach logged areas that have regrown and appear natural.

(7) Surroundings (External Influences): Pockets of developed land along Tokeen Bay, Devilfish Bay, and Shakan Strait are not considered part of the roadless area even though they are part of the Congressionally designated Mt. Calder-Mt. Holbrook LUD II Area. The south and southwest boundaries are defined by developed areas. Developed areas also lie to the east across El Capitan Passage and to the south.

(8) Attractions and Features of Special Interest: The mountains and peaks are special attractions of the area. High quality scenery; good boating opportunities in the sheltered saltwater bays and inlets such as Dry Pass; good opportunities to view whales and other wildlife; primitive recreational opportunities that include hiking, caving, exploration, solitude, challenge, camping, fishing, sea kayaking, hunting, and subsistence use; interpretation and education of the cultural resources in the area; and study of the natural processes which formed this area are all special attractions. There is a public recreation cabin on the shore of Shipley Bay and a trail that leads to Shipley Lake. The area contains 27 inventoried recreation places, which cover 33,622 acres, or 47 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: Harvested, but unroaded, areas along the shore have been added to the roadless area. Trees have re-grown in these beach-logged areas and they no longer dominate the vista. Other changes resulted from more accurately mapping of the developed areas. Several smaller areas along the developed boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified except for the recreation cabin on Shipley Bay and older beach logged areas that have regrown. This area has very high natural integrity and apparent naturalness and is suitable for wilderness classification. Some developed areas exist in west Kosciusko, Marble, and Orr Islands; however, this has a low impact on the overall natural integrity of the landscape.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There are very high opportunities for solitude, serenity, self-reliance, adventure, challenge, and primitive recreation especially in the steep, mountainous terrain, in alpine and sub-alpine areas, along the shore and uplands of the coast, within isolated caves, and on the deserted islands within the area. The rugged terrain, with many isolated lake or alpine basins, enhances the opportunity for solitude. Present recreation use levels are low; even the public recreation cabin at Shipley Bay is not heavily used. Floatplanes and boats used to transport people to the Shipley Bay cabin may occasionally disturb users. A person camping within the roadless area is unlikely to see others.

Several portions of this area provide excellent opportunities for primitive recreation due to their remoteness and scenic and recreation attractions, including lakes, scenic alpine areas, and protected saltwater bays. As with all backcountry areas on the Tongass, the opportunity for challenge and risk in this area is high. The climate, the rugged terrain, the presence of karst features such as vertical pits, the isolation and distance from population centers with medical facilities, the barriers to communication, and the presence of large wild animals all contribute to the need for good preparation and knowledge of backcountry survival skills for anyone using this area. Hypothermia and bear encounters are just two examples of the many risks that must be considered before traveling in the backcountry of southeast Alaska.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	10,541	15%
Semi-Primitive Non-Motorized (SPNM)	41,944	59%
Semi-Primitive Motorized (SPM)	13,116	18%
Roaded Natural (RN)	334	0%
Roaded Modified (RM)	5,489	8%

The area contains 27 inventoried recreation places, which cover 33,622 acres, or 47 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	2	6,147
SPNM	8	19,305
SPM	11	6,364
RN	1	334
RM	12	1,472

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

The only developed recreation facility is a public recreation cabin at Shipley Bay.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the

Kosciusko Roadless Area was 23 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 24.

(4) Ecologic and Geologic Values: Karst and cave formations in the limestone underlying this roadless area may be of national and international significance because of their complexity, the resources they contain, and intense development. Littoral caves along the outer coast contain important deposits. The roadless area contains productive fish and wildlife habitat.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) lists two of the fifteen VCUs, 546 and 548 on Sea Otter Sound and Tokeen Bay as primary salmon producers, and VCU 537.2 as a non-producer. No VCUs were listed as primary sport fish producers (ADF&G 1998).

Coho, pink, chum, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char inhabit the lakes and streams in this area. The major fish-bearing waters identified by the Anadromous Waters Catalogue (ADF&G, 2000) include Trout Creek, Shipley Bay Creeks and Lake, Tokeen Bay Creeks, and Davidson Inlet Creeks. Charley Creek and Tokeen Creek receive an estimated peak escapement of 95,600 and 59,700 pink salmon, respectively (ADF&G, 1998). Shipley Creek and Lake, in VCU 541, lie within the Mt. Calder-Mt. Holbrook Legislated LUD II area. The stream system supports a sockeye fishery, and fishing is also good for cutthroat, rainbow, steelhead, Dolly Varden char, pink and chum salmon.

(b) Wildlife Resources: Sitka black-tailed deer, black bear, wolves, mink, and bald eagles are among the species that inhabit the area. There is good alpine habitat for ptarmigan. Moose sign has been reported on Prince of Wales Island, but brown bear and mountain goats do not.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Thorne Bay Ranger District.

(d) Karst, Cave, and Other Geologic Resources: Karst and cave formations in the limestone underlying this roadless area may be of national and international significance because of their complexity, the resources they contain, and intense development. Extensive inventories in this area have yielded some of the highest density of caves found throughout the Alexander Archipelago. Sub-alpine fir can be found on the ridge crests in protected alcoves. The karst systems found here extend from the alpine to the sea providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. Littoral caves along the outer coast contain important paleontological and cultural deposits. Karst resources represent 6,366 acres, or 9 percent, of the roadless area. About 30 percent of the karst is mapped as high vulnerability karst. There are no glaciers or other unique geologic features in this area. Portions of the area are thought to have been ice-free during the last glacial episode and are the subject of research to determine the ecology of the outer coast during the last glacial period and the extent and timing of glaciation.

(5) Scientific and Educational Values: There are opportunities to study forests, wildlife, fish, plants, glacial history, and karst formations. Karst and cave formation in the limestone underlying this roadless area are of national and international significance because of their development, complexity, the resources they contain, and their level of development. The closest educational institutions are in the communities of Craig, Klawock, and Naukati. However, due to the uniqueness of this area, much research has been focused here.

(6) Scenic Values: This area is part of the Kupreanof Lowlands character type which is characterized by predominantly low, rolling relief, with elevations seldom greater than 1,500 feet. Numerous island groups and intricate waterways are also common in this character type. Much of this roadless area includes terrain that is much more rugged and diverse than is common in the character type.

A natural landscape dominates the view of the roadless area from the surrounding waterways and important use areas identified in the Forest Plan,. Also, once in the roadless area, the landscape remains scenic and unmodified, except directly surrounding the recreation cabin site. Outstanding scenic features include the landscape around Mount Francis, the highly diverse terrain around the Nipples, and, particularly the Odd Rock Creek drainage with its scenic meadows and dramatic steep slopes enclosing this meadow.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: Sumner Strait, a tour ship route; Sea Otter Sound, a small boat route; the Tokeen Bay, Davidson Inlet, Shaken Bay, Shaken Strait, Dry Pass, El Capitan Pass and Marble Pass saltwater use areas; and the Shipley Lake public recreation cabin. The area around Kosciusko receives touring boat traffic and is also occasionally frequented by small (less than 100 passenger) cruise ships. Visitation is moderate and the area is popular due to the rugged scenery and protected waterways around Sea Otter Sound, Shipley Bay, El Cap Pass, and Sumner Strait. Whale watching in these areas is very good in the summer months and is enjoyed by people on private fishing charters, personal craft, and small cruise ships.

About 31 percent of this area is inventoried as Variety Class A, which possess a high level of landscape diversity unique for Kupreanof Lowland character type. Terrain features, geologic features, and water features all exhibit high visual diversity within this area. Most of this area, 66 percent, is inventoried as Variety Class B, which have features common for the landscape character type. Another 1 percent of the area is in Variety Class C, which have a low degree of landscape diversity. Approximately 3 percent of the area was not inventoried for Variety Class type.

Most of this area, approximately 72 percent, is in a Type I Existing Visual Condition (EVC), where the natural landscape has remained unaltered by human activity. About 4 percent of the area has an EVC III, where changes in the landscape are seen by the average person, but they do dominate the landscape. Land where alterations to the landscape are obvious but tend to blend with natural landscape features (EVC IV) are found on about 12 percent of the area. About 9 percent of the area has an EVC V, where changes to the landscape are obvious to the average visitor and appear to be major disturbances. Approximately 3 percent of the area was not inventoried for EVC.

(7) Social, Cultural and Historical Values: The coastal area was used by prehistoric and historic Native cultures. The permanent Tlingit village of Shakan was located adjacent to this area. Many traditional use sites and seasonal camps used out of Shakan are located here. Karst development in the area (caves) elevates the area to high sensitivity for cultural resources. The west coast area is known to have been used by the Russians for trading with the Alaska Native people. There is some evidence of early day hand logging along several of the sheltered bays. Marble mining occurred in the Dry Pass area early in the last century and currently is ongoing on nearby Marble Island. Recreation use is low, even at the public recreation cabin in Shipley Bay, due to the high cost of accessing the area. No outfitter/guide permits were issued for the roadless area during 2000. The roadless area receives some subsistence use, primarily in Shakan Bay. VCU 546 on Sea Otter Sound was listed among the VCUs with the highest community use value. VCU 549.1, along El Capitan Passage, was listed in the second most important group. All VCUs were listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998). The Shakan molybdenite prospect, associated known molybdenum-copper deposits near the old town site of Shakan, and the El Cap gold prospect adjacent to Tokhini Creek (north of Devilfish Bay) are found in the roadless area. In 1996, the AVA proposed an overnight wildlife observatory for 50 people and a backcountry recreation lodge for 50 people along the El Capitan Passage.

(8) Manageability as Wilderness and Boundary Conditions/Changes: Most of the area is well-defined by saltwater. The southwest boundary is defined by a developed area at the base of Mount Francis. There are three other enclaves of developed areas in the east. The lack of well-defined topographic boundaries could reduce the area's manageability as a wilderness. The feasibility of managing the roadless area as a wilderness might be improved somewhat if the southwest boundary were moved to the LUD II boundary east of Mount Francis.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. The roadless area is somewhat isolated and recreation use levels are low; however, the recreation and tourism potential of this area is high. Sea kayaking, whale watching, wildlife viewing, camping, hiking, and exploring have the potential to increase as tourism and recreation increase throughout Alaska. Tourism potential is a major part of Alaska's economy. The industry attracts over 1.1 million visitors annually. There has been a growing recognition that tourism depends on scenic quality, wildlife, and wilderness (Behnke, 1999).

Potential exists for trail construction, additional recreation cabins, and anchor buoys throughout this area. Karst and cave development in the roadless area may provide a unique opportunity to develop destination recreation facilities in association with interpretation and viewing of these features and topography. E1 Capitan Passage and Dry Passage are part of an identified kayak and small boat route along the west coast of Prince of Wales Island. A few potential three-sided shelter sites have been noted along this route within this roadless area.

In 1996, the AVA proposed the following recreation development for Shaken Bay, a day-use recreation facility for 300 people, and for El Capitan Passage: an overnight wildlife viewing observatory for 50 people/day and a backcountry recreation lodge for 50 people.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resources: No fish enhancement projects are currently planned within the roadless area.

(4) Wildlife Resources: No wildlife enhancement projects are currently planned within the roadless area.

(5) Timber Resources: There are 40,810 acres mapped as productive old-growth forest and 716 acres mapped as second-growth forest in the roadless area. Of this, approximately 12,793 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 3,013 acres or 4 percent of this roadless area are estimated to be suitable for timber production. Approximately 1,515 of the suitable acres are mapped as high-volume old growth; of these acres, 704 are mapped as high-volume, coarse-canopy old growth. Managing timber in most of the roadless area would require extending the existing road system into the roadless area. The area to the southwest and to the east, have road networks and the necessary sites for transferring logs to saltwater.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: This area contains 26,591 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals (Coldwell 1990, USDA Forest Service 1991). In addition, this area contains 44,521 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 44,381 of these acres are considered to have moderate potential for development.

One inactive claim is located within the area. Potential exists for development of the limestone and marble resources. Part of the Shipley River corridor lies within the U.S. Bureau of Mine's El Capitan Pass Minerals Tract where copper, molybdenum and uranium are present. The USGS Mineral Resources Data website indicates there are several prospects in the area for copper, molybdenum, zinc and lead.

(8) Transportation and Utilities: There are no existing or planned transportation or utility corridors within, or adjacent to, the roadless area.

(9) Water Availability and Use: The only source of water demand is from the public recreation cabin on Shipley Lake. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The wildlife, fish, plants, glacial history, and karst formations are of interest. Karst and cave formation in the limestone underlying this roadless area are of national and international significance because of their development, complexity, the resources they contain, and their level of development. The karst and high elevation areas are of high interest and may play a major part in rewriting the glacial history of SE Alaska. Geologically, paleontologically, and archaeologically significant investigations are just beginning to yield previously unknown facts about the advance of the last ice age. The mapped karst resources encompass approximately 6,366 acres or nine percent of the roadless area.

(11) Land Use Authorizations: There are no special use authorizations within the roadless area.

(12) Land Status: The entire area is National Forest System land.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Local interest is primarily in maintaining the area for subsistence fishing, and hunting.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. A portion of the roadless area was designated as LUD II by the Tongass Timber Reform Act of 1990. In 2001, HR 2908 proposed managing the entire roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The Sumner Strait Fish and Game Advisory Board and local residents recommended that the area be dedicated to subsistence uses. The Southeast Alaska Conservation Council (SACC), many local residents, and others recommended against additional road building and logging, especially along the narrow and scenic El Capitan Passage. The SACC stated that the area merited special protection for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. The Alaska Rainforest Campaign and SACC recommended LUD II or similar protection. The Alaska Forest Association, the Alaska Miners Association, and the AVA recommended that no new wilderness be designated on the Tongass National Forest. The Alaska Miners Association wanted the area managed as a Mineral LUD. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber. In 1996, the AVA proposed an overnight wildlife observatory for 50 people and a backcountry recreation lodge for 50 people along the El Capitan Passage.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless are available.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as having important fish and wildlife habitat and populations; although not a top priority for protection, it ranked in their top third among all roadless areas.

The Alaska Department of Fish and Game rated the Kosciusko roadless area (VCUs 536, 541, 542, 548, and 549) as the sixth highest priority for protection on Prince of Wales Island and Adjacent Islands. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

SEACC recommended this area be designated as LUD II.

One individual noted how impacted the karst of Koscisusko Island were, but noted that, in 1998, a team documented nearly 50 new caves, many with relatively horizontal passages – an unusual feature among Southeast Alaskan caves. He stated that Koscisusko Island will be critical for its karst biology and will shelter numerous unique and possible new species of cave-adapted invertebrates.

A number of cave/karst experts and other individuals stated that the North Central Prince of Wales Biogeographic Province contains the most celebrated and explored caves and karstlands in the Tongass; Kosciusko and Calder Roadless Areas include spectacular limestone massifs and caves as well as remnants of high volume old growth karstland forest. The Karst Waters Institute considers Kosciusko Island Karst to be one of the 10 most endangered karst areas worldwide. The commenters indicated that these Roadless Areas, 515, 516, and 517, together with contiguous karstlands in Roadless Area 518, could be combined to create a karst reserve/wilderness that would be renowned throughout the world.

A number of individuals identified the 1999 additions to the Calder Holbrook area as needing protection. Some commented on the need for protection of Shakan Bay and Shipley Bay. Some individuals recommended this area for permanent protection as wilderness and some for LUD II.

(2) Nearby Roadless and Wilderness Areas and Uses: This roadless area is separated from the Calder Roadless Area by Shakan Strait. Portions of both roadless areas are part of the Congressionally-designated Mt. Calder-Mt. Holbrook LUD II Area. The El Capitan Roadless Area (517) lies to the northeast and the Sarkar Roadless Area (514) lies to the east. Both are on Prince of Wales Island. The Kuiu Bay Wilderness lies approximately 10 miles to the west, across the Sumner Strait. Recreation and subsistence are the main uses for these areas. Use levels are generally low. Coronation Island and Warren Island Wildernesses lie to the west and southwest, respectively.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	75	130
Wrangell (Pop. 2,308)	45	65
Petersburg (Pop. 3,324)	50	70
Juneau (Pop. 30,711)	155	160

Hollis, approximately 45 air miles and 120 road miles to the southeast, currently is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Kosciusko Roadless Area is on Kosciusko Island, near the northwest end of Prince of Wales Island. Sumner Strait and Shipley Bay lie to the northwest, El Capitan Passage to the east, and Davidson Inlet and Tokeen Bay to the south. The roadless area also includes several islands between Davidson Inlet and Tokeen Bay. This area is within the low mountain arc of the Pacific Mountain system. The maximum elevation is 3,100 feet. Much of the area is underlain by limestone and extensive karst has developed here. Numerous small streams drain to saltwater and there are several freshwater lakes within this roadless area. Shipley Lake is the largest freshwater lake.

The area is mostly unmodified and in a natural condition. The natural integrity and apparent naturalness is very high. The opportunity for solitude and primitive recreation is also considered to be very high within the area.

The Kosciusko Roadless Area has very high scenic quality; approximately 31 percent of the landscape is considered distinctive from a scenery standpoint. Karst and cave formations in the limestone underlying this roadless area may be of national and international significance because of their complexity and the resources they contain. Littoral

caves along the outer coast contain important paleontological and cultural deposits. Portions of the area are thought to have been ice-free during the last glacial episode and are the subject of research to determine the ecology of the outer coast during the last glacial period.

The roadless area includes about 22,576 acres of high-volume, old-growth forest. Of these acres, approximately 9,364 are mapped as high-volume, coarse-canopy old growth.

The Kosciusko Roadless Area is classified as being in the North Central Prince of Wales Island Biogeographic Province and makes up about 5 percent of the province. It is one of 15 inventoried roadless areas found within the province, which make up about 44 percent of the province. The Karta River Wilderness makes up about 3 percent of the province, and three designated LUD II areas (Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and Salmon Bay) make up about 5 percent of the province.

The Kosciusko Roadless Area lies completely within the Kuiu-Prince of Wales Fjordlands Ecological Section and represents 7 percent of the ecological section. Approximately 13 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section is in existing wilderness, 8 percent is in existing LUD II, and an additional 33 percent is protected by other existing non-development LUDs.

Approximately half (47 percent) of the roadless area is in the Kuiu-Prince of Wales Granitics Ecological Subsection; this portion of the roadless area represents 23 percent of the entire ecological subsection, 19 percent of which is protected in existing wilderness, 23 percent in existing LUD II, and 36 percent by existing non-development LUDs. Forty-one percent of the roadless area is in the North Prince of Wales Complex Ecological Subsection; this portion of the roadless area represents 36 percent of the entire ecological subsection, 28 percent of which is in existing LUD II and 18 percent is protected by existing non-development LUDs. The balance (11 percent) of the roadless area is in the North Prince of Wales-Kuiu Carbonates Ecological Subsection; this portion of the roadless area represents 3 percent of the entire ecological subsection, 2 percent of which is in existing LUD II and 25 percent is protected by other existing non-development LUDs.

The Kosciusko Roadless Area was rated 24 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 25th from the highest (along with 4 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the roadless area in an unroaded condition, and some support for designating the area as a wilderness. Designation would create a wilderness that would contain relatively large areas of well-developed karst that also included important paleontological and cultural information, and where extensive investigation and research is ongoing. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be high to very high.

V. Environmental Consequences

The Kosciusko Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, or 4 is implemented. Approximately 76 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 24 percent of the roadless area. The land in the development LUDs includes an estimated 3,013 acres that are suitable for timber production (2 percent of the suitable acres on the Thorne Bay Ranger District). Approximately 704 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 26,591 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains an estimated 44,521 acres of undiscovered locatable mineral resources; 44,381 of these acres are considered to have moderate potential for development. Karst and cultural resource investigation and research activities would continue. The recreation and special use programs would continue. The values associated with the natural settings of the roadless area are mostly protected by the Forest Plan. The high cultural, karst, and most old growth and scenic values are protected under the Forest Plan.

Under Alternative 2, all of the existing LUD II area would be converted to Recommended Wilderness LUD. This would not affect timber management because this area is currently allocated to a non-development LUD. The total area suitable for timber harvest would not change from Alternative 1. Ongoing karst, cultural resource, recreation, special use, and minerals programs could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the existing LUD II portion of the roadless area, including the scenic, karst, old growth, and cultural values, would be provided long-term protection if designated wilderness.

Under Alternative 5 and 7, a 58,214 acre portion of the existing LUD II, Old-growth Habitat, and Semi-remote Recreation, would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed in the Recommended Wilderness LUD and the area classified as suitable for timber production would decrease to approximately 1,185 acres. Ongoing karst, cultural resource, recreation, special use, and minerals programs could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the majority of the roadless area, including the scenic, karst, old growth, and cultural values, would be provided long-term protection if designated wilderness.

Under Alternative 6, a 28,313-acre portion of the area would be converted to Recommended LUD II. This would convert all lands not currently designated LUD II to Recommended LUD II. Timber harvest would not be allowed. Ongoing karst, cultural resource, recreation, special use, and minerals programs would continue similar to current conditions with little restriction. The values associated with the natural settings of the roadless area, including the scenic, karst, old growth, and cultural values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed. Ongoing karst, cultural resource, recreation, special use, and minerals programs could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic, karst, old growth, and cultural values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 515 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness		43,265			58,214		58,214	71,578
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	8,025	8,025	8,025	8,025	4,224		4,224	
Semi-remote Recreation	3,191	3,191	3,191	3,191	3,145		3,145	
Recommended LUD II						28,313		
LUD II	43,265		43,265	43,265		43,265		
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	832	832	832	832	832		832	
Timber production	16,264	16,264	16,264	16,264	5,162		5,162	
TOTAL	**71,578**	**71,578**	**71,578**	**71,578**	**71,578**	**71,578**	**71,578**	**71,578**
Suitable Timber Lands	3,013	3,013	3,013	3,013	1,185	**0**	1,185	**0**

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Calder (516)

ACRES (NFS): 12,218

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Kuiu-Prince of Wales Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 22

I. Overview and Description

(1) Location and Access: The Calder Roadless Area is located on the northwest end of Prince of Wales Island, approximately 50 air miles northwest of Hollis, currently the nearest stop on the Alaska Marine Highway. Funding has been made available for a second ferry that will provide service between Coffman Cove and Wrangell in 2003, providing closer access and potentially more visitors to this roadless area. The roadless area is bounded on the north and east by areas developed for timber management. These roaded areas separate the Calder Roadless Area from the El Capitan Roadless Area (517). Calder Bay lies to the southeast. Sumner Strait lies to the west and Shakan Bay and Shakan Strait lie to the south. Access is by the Prince of Wales Island road system or by boat and floatplane. Access to the interior is by foot or helicopter. There are no developed trails or places suitable for landing wheeled aircraft.

(2) History: The coastal area was used since prehistoric times by Native people. The islands in Shakan Bay were homesites for aboriginal people, and historically used as a gathering area for the fishing fleet which continues into present time. Approximately 82 percent of this roadless area was designated Land Use Designation (LUD) II by Congress in the 1990 Tongass Timber Reform Act.

(3) Geography and Topography: The area includes alpine and subalpine zones, the rugged terrain of Mount Calder, extensive karst topography, a long, rocky coastal shoreline along Prince of Wales Island, and lower relief on the smaller islands just to the south. Mount Calder is the highest point, with an elevation of 3,400 feet. Numerous small streams drain to Shakan Bay. There are 4,398 acres of islands in the roadless area, including the Barrier Islands in Sumner Strait and Hamilton, Divide, and Middle Islands in Shakan Bay, as well as numerous small islands and rocks along the coast. There are no glaciers or alpine features mapped in the roadless area. There are approximately 68 miles of saltwater shoreline and 350 acres of rock.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the North Central Prince of Wales Island Biogeographic Province. This province is characterized by rolling, gentle landforms but with localized rugged topography. Limestone is common and overall forest productivity is high. Karst topography and caves are present. Precipitation is relatively low due to interception by lands to the south and southwest.

Ecological Section/Subsection. The Calder Roadless Area is contained entirely within the Kuiu-Prince of Wales Fjordlands Ecological Section (247F). This area is represented by two ecological subsections (see table below). The North Prince of Wales Complex Ecological Subsection (63% of roadless area) is characterized by rolling hills and wide U-shaped valleys underlain by non-carbonate conglomerate and granodioritic rocks. Productive hemlock and hemlock-spruce forests comprise about two thirds of the landscape, and the remainder is low productive mixed-conifer and lodgepole pine forested wetlands. The North Prince of Wales-Kuiu Carbonates Ecological Subsection (37% of roadless area) is characterized by low-elevation hills and mountain slopes underlain by limestone and marble karstlands. Hemlock and hemlock-spruce forests are found on karst soils, which can be highly productive (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kuiu-Prince of Wales Fjordlands	North Prince of Wales Complex	63%
	North Prince of Wales-Kuiu Carbonates	37%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock and are typically about 40 inches deep. Generally, steeper areas have better-drained soils and flat areas are poorly drained. Areas over 2,000 feet elevation are alpine.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with large components of cedar. Mount Calder-Virginia Mountain contains the only known coastal population of subalpine fir (USDA Forest Service, 1997; FEIS Appendix D, p 28). Less than 100 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 11,559 acres mapped as forest land of which 8,983 acres or 78 percent are mapped as productive old-growth forest. Of the productive old growth, 6,083 acres (68 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 1,403 acres of high-volume, coarse-canopy old growth. The area includes 629 acres of second growth, all resulting from older beach logging.

(d) Fish Resources: Calder Creek and several small, unnamed streams in the roadless area provide habitat for coho, pink, and chum salmon, as well as steelhead trout (ADF&G, 2000).

(e) Wildlife Resources: Sitka black-tailed deer, black bear, wolves, mink, and bald eagles are the best known species that inhabit the area. Moose inhabit Prince of Wales Island, but brown bear and mountain goats do not.

(5) Management Direction and Current Uses: This roadless area was allocated to five Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These five LUDs are Timber Production, Modified Landscape, LUD II, Special Interest Area, and Semi-remote Recreation.

LUD	Acres
Timber Production	741
Modified Landscape	384
LUD II	10,278
Special Interest Area	791
Semi-remote Recreation	25

Approximately 9 percent of the roadless area was allocated to a development LUD, which allows timber harvest and the associated road construction (Timber Production, Modified Landscape). Approximately 6 percent of the roadless area was allocated to the Timber Production LUD. Near Calder Bay, approximately 3 percent of the roadless area was allocated to the Modified Landscape LUD.

Most of the roadless area, approximately 91 percent, was allocated to a non-development LUD (LUD II, Special Interest Area, Semi-remote Recreation). The majority of the roadless area, 84 percent, was allocated to the LUD II designation. This LUD created the Mount Calder/Mount Holbrook LUD II area, which is one of the 12 areas that were allocated to permanent LUD status under the Tongass Timber Reform Act of 1990. On Mount Calder, approximately 7 percent of the roadless area was allocated the Special Interest LUD in recognition of the extensive karst developed here. Less than 1 percent of the roadless area was allocated to the Semi-remote Recreation LUD, primarily located in small islands along the perimeter of the area,.

A portion of the roadless area is part of the 42,763-acre Shakan Mineral Tract that contains molybdenum and has a gross value of $2,837,000. Shakan Bay receives considerable use by the fishing fleet and by recreation boaters.

Recreation use levels are not well documented but are likely low throughout most of the roadless area. Most recreation activities include hiking to Mount Calder and boating along the outer islands and coast of the roadless area. There are no developed recreation facilities. The roadless area receives some subsistence use, primarily in Shakan Bay. The VCUs in this area were not included among the highest value community use areas identified by the Alaska Department of Fish and Game (ADF&G) in their comments of the Tongass Land and Resource Management Plan EIS (1996). No outfitter/guide permits were issued for the roadless area in 2000. There is currently an application and special use permit request for an aquaculture facility in T65N, R77E, Sections 31 or 32.

(6) Appearance (Apparent Naturalness): This area is unmodified and in a natural condition, except for older beach-logged areas on the south coast and on the major islands. Trees have re-grown in these areas and harvest areas are no longer visually evident. Extensive timber related development in adjacent areas to the north and east influence the apparent naturalness along these boundaries. The topography within the roadless area varies greatly and the majority of views are confined to the immediate vicinity of the viewer or are limited by the ridgeline that separates the roadless area from the existing harvest. The most visible harvest is along the north boundary and is visible downslope from within the heart of the northern part of the roadless area in several places. Harvest units along the more extensive east boundary are mostly visible from the edge of the roadless area, which in most places, is the ridgeline.

(7) Surroundings (External Influences): The adjacent areas to the north and east have been extensively roaded and logged, affecting the east side of the Mount Calder ridge. There is a State parcel in the northwest of the roadless area around Hole-in-the-Wall. The State land is separated from the roadless area by roaded and harvested areas, except for a narrow strip along the beach. Disturbances such as traffic on forest roads are generally low.

(8) Attractions and Features of Special Interest: In addition to the scenic features, attractions include Mount Calder Special Interest Area with nationally significant karst formations; fishing and boating along the coast, outer islands, and associated uplands; the opportunity to see wildlife; the opportunity to study the geologic processes which formed the area; and the opportunity to enjoy the fishing and solitude of Shakan Bay. The area contains 10 inventoried recreation places, which cover 8,066 acres (65 percent) of the roadless area. There are no improved trails within the area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: Harvested, but unroaded, areas along the shore have been added to the roadless area. Trees have re-grown in these beach-logged areas and these harvest areas are no longer visually evident. Other changes resulted from more accurately mapping the roaded and harvested areas and the State selection of an area in the northwest of the original roadless area (and LUD II area). Several smaller areas have been excluded between the Draft and Final SEIS to improve the potential manageability of the roadless area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: This area is unmodified and in a natural condition, except for older beach-logged areas on the south coast and on the major islands. Trees have re-grown in these areas and the harvest areas are no longer visually evident. The natural integrity and apparent naturalness of most of the roadless area is high to very high. The extensive development on the eastern and northern edges of this area, some of which includes the lower slopes of Mount Calder, influence the overall natural integrity of this area. They also potentially decrease its suitability for wilderness classification. However, most of the development on the east and northern edges of the roadless is viewed from the ridgeline on the edge of the roadless area.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is high opportunity for solitude and very high opportunity for primitive recreation in the outer islands and areas away from the north and east boundaries where sights and sounds of ongoing management activities may be evident. Shakan Bay receives use by the fishing fleet and by recreational boaters and people camped along the shore may be disturbed by this traffic. Recreation use levels are not well documented but are likely low throughout most of the roadless area. A person camped within the area is unlikely to see others.

The dense vegetation, typical in southeast Alaska, combined with steep, rugged terrain around Mount Calder, and the presence of black bears, adds a degree of challenge to users of the area. As with all backcountry areas on the

Tongass, the opportunity for challenge and risk in this area is high. The climate, the rugged terrain, the isolation and distance from population centers with medical facilities, the barriers to communication, and the presence of large wild animals all contribute to the need for good preparation and knowledge of backcountry survival skills for anyone using this area. Hypothermia and bear encounters are just two examples of the many risks that must be considered before traveling in the backcountry of southeast Alaska.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	6,245	51%
Semi-Primitive Motorized (SPM)	3,966	32%
Roaded Natural (RN)	537	4%
Roaded Modified (RM)	1,417	12%

The area contains 10 inventoried recreation places, which cover 8,066 acres (66 percent) of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	5	4,793
SPM	2	2,068
RN	1	537
RM	6	667

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

There are no developed recreation facilities in the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Calder Roadless Area Roadless Area was 22 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was also given a rating of 22.

(4) Ecologic and Geologic Values: Karst and cave formation in the limestone and marbles underlying this roadless area may be of national significance because of their development, complexity, the resources they contain, and limited expanse. They are primarily in the Mount Calder Special Interest Area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list any VCUs as primary salmon or sportfish producers (ADF&G, 1998). Calder Creek, in addition to several small, unnamed fish-bearing streams in the area, provide habitat for coho, pink, and chum salmon, as well as steelhead trout (ADF&G, 2000).

(b) Wildlife Resources: Sitka black-tailed deer, black bear, wolves, mink, and bald eagles are the best known species that inhabit the area. Moose sign has been reported on Prince of Wales Island, but brown bear and mountain goats do not occur. The only large mammal species found on the Barrier Islands are deer and wolves (MacDonald and Cook, 1999).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Thorne Bay Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There is a fairly large band of mostly high vulnerability karst in this roadless area, extending from Protection Head in the north to Mount Calder and Calder Bay in the south. This band continues on the northeast tip of Middle Island and the northeast peninsula of Hamilton Island. Karst and cave formation in the limestone and marbles underlying this roadless area may be of national significance because of their development, complexity, the resources they contain, and limited expanse. This represents 3,591 acres (29 percent) of the roadless area. About 60 percent of the karst is mapped as high vulnerability karst. There are no glaciers or other unique geologic features in this area.

(5) Scientific and Educational Values: Mount Calder Special Interest Area and the associated ridges within this roadless area are mainly underlain by limestone and marble. Karst systems have developed into the limestone and marble. Though a few caves have been inventoried in this area exploration has been limited. Extensive karst systems are known from the intensity and numbers of features found here. Paleontological discoveries are likely as well as archaeological finds reported in oral traditions. Because of the thickness of the limestone and marble in this area, vertical pits and cave systems of record depth are possible. Extensive areas of limestone and marble are exposed from sea level to the ridge tops in these glaciated valleys. Karst development is extensive. Many caves have been inventoried here and significant paleontological finds have come from a few. Subalpine fir can be found on the ridge crests in protected alcoves. The karst systems found here extend from the alpine to the sea providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. The many offshore islands and Mount Calder are also of interest.

(6) Scenic Values: This roadless area is part of the Kupreanof Lowland character type, which is characterized by predominantly low rolling relief, with elevations seldom greater than 1,500 feet. Numerous island groups and intricate waterways are also common in this character type. This roadless area is dominated by Mount Calder, which exhibits greater relief and more distinctive rockforms than is common for the specific character type.

A natural landscape dominates the view of this roadless area from the surrounding waterways and important use areas identified in the Forest Plan. Also, once in the roadless area, the landscape remains scenic and unmodified. Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: Sumner Strait, a tour ship route; the Shakan Bay and Shaken Strait saltwater use areas; and Bear Valley Lodge.

About 64 percent of this area was inventoried as Variety Class A, which has a high degree of landscape diversity relative to its character type. The major distinctive landscape features in this area are the limestone rock forms that make up Mount Calder. Approximately 30 percent, was inventoried as Variety Class B, and has landscape characteristics common for the character type. Approximately 7 percent of the area was not inventoried for Variety Class type.

About 62 percent of the area is in Existing Visual Condition (EVC) I, where the landscape remains unaltered by human activity. Five percent of the area is in EVC III, in which the average person notices changes in the landscape, but they do not attract attention. About 15 percent is in EVC IV, the landscape alterations are easily noticed but tend to blend in with the natural features of the landscape. About 12 percent is in EVC V, where

alterations are obvious and appear to be major disturbances. Approximately 7 percent of the area was not inventoried for EVC.

(7) Social, Cultural, and Historical Values: The coastal area was used since prehistoric times by Alaska Native people. The islands in Shakan Bay provided homesites for aboriginal people and Shakan Bay was, and still is, used as a gathering area for the fishing fleet. The roadless area is approximately 50 air miles northwest of Hollis, currently the nearest stop on the Alaska Marine Highway and about 4 miles south of the community of Port Protection. Fishing, and to a lesser extent, timber harvest are important to the local economy. Shakan Bay receives considerable use by the fishing fleet and by recreational boaters.

Recreation use levels are low throughout most of the roadless area. There are no developed recreation facilities. The majority of the area was designated LUD II by Congress in the 1990 Tongass Timber Reform Act. The roadless area receives some subsistence use, primarily in Shakan Bay. None of the VCUs in the roadless area are listed among the VCUs with the highest community use values or with highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998). No outfitter/guide permits were issued for the roadless area in 2000.

(8) Manageability as Wilderness and Boundary Conditions/Changes: Developed areas and saltwater form definite boundaries of this roadless area. Due to the topography, the sight and sound of motor vehicles and timber management activities are not apparent from within most of the roadless area. Feasibility of management as wilderness is high.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Tourism potential is a major part of Alaska's economy. The industry attracts over 1.1 million visitors annually. There has been a growing recognition that tourism depends on scenic quality, wildlife, and wilderness (Behnke, 1999). This roadless area is somewhat isolated, possibly limiting its potential to draw tourists. It is approximately 125 miles by road from Hollis, the closest stop on the Alaska Marine Highway. Funding has been made available for a second ferry that will provide service between Coffman Cove and Wrangell in 2003, providing closer access and potentially more visitors to this roadless area. Potential exists for some construction of trails and saltwater support facilities such as anchor buoys and docks. Karst and cave development in the roadless area may provide a unique opportunity to develop destination recreation facilities in association with interpretation and viewing of these features and topography. An identified potential kayak route goes through the islands in the roadless area along the west coast of Prince of Wales Island. Recreation cabins are also a potential for this area. There is also potential to manage for low density, semi-primitive recreation experiences.

In 1996, the Alaska Visitor Association (AVA) proposed a day-use recreation facility for 300 people along Shakan Bay and trails in the Calder Bay area.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence uses.

(3) Fish Resources: No fish habitat enhancement projects are currently planned within the roadless area.

(4) Wildlife Resources: No wildlife habitat enhancement projects are currently planned within the roadless area.

(5) Timber Resources: There are 8,983 acres inventoried as productive old-growth forest and 629 acres as second-growth forest due to harvest in the roadless area. Of this, approximately 639 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 302 acres (3 percent) of this roadless area are estimated to be suitable for timber production. Approximately 226 of the suitable acres are mapped as high-volume old growth; of these acres, 55 are mapped as high-volume, coarse-canopy old growth. Managing timber in most of the roadless area would require extending the existing road system into the roadless area. The area to the north and east has an extensive road

network and the necessary sites for transferring logs to saltwater. The Calder EIS is scheduled on the 10-year Sale Plan.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: This area contains 7 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). This area contains an estimated 51 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have moderate potential for development.

The area is not currently mined and no known prospecting is taking place within this roadless area. The southern part of this area contains marble deposits. The Calder Marble Quarry owned and operated by Sealaska Corporation is currently being operated adjacent to this roadless area.

(8) Transportation and Utilities: There are no existing or planned transportation or utility corridors within, or adjacent to, the roadless area.

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: Karst and cave formation in the limestone and marbles underlying this roadless area, especially in the Mount Calder Special Interest Area, may be of national significance because of their development, complexity, the resources they contain, and limited expanse. The mapped karst resources encompass approximately 3,591 acres or 29 percent of the roadless area. Management as wilderness may limit research activities in the area.

(11) Land Use Authorizations: There is currently an application and special use permit request for an aquaculture facility in T65N, R77E, Sections 31 or 32.

(12) Land Status: All of the area is National Forest System land. A small area of encumbered land is located on Divide Island.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Shakan Bay is important to local residents for subsistence and recreation purposes. There is interest and local, documented support to develop a west coast kayak and skiff route that would pass by the roadless area, which may include development of cabins, shelters, and tent platforms. There is also interest in developing a trail to Calder Mountain.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. A portion of the roadless area was designated as LUD II by the Tongass Timber Reform Act of 1990. In 2001, HR 2908 proposed managing the entire roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The Sumner Strait Fish and Game Advisory Board recommended against road building and logging in unharvested areas near Labouchere Bay. The Alaska Forest Association, the Alaska Miners Association, and the AVA recommended that no new wilderness be designated on the Tongass National Forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber. In 1996, the AVA proposed a day-use recreation facility for 300 people along Shakan Bay and trails in the Calder Bay area.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commentors wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless area have been identified.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended this area be designated as LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 516 for permanent protection as LUD II.

A number of cave/karst experts and other individuals stated that the North Central Prince of Wales Biogeographic Province contains the most celebrated and explored caves and karstlands in the Tongass. Kosciusko and Calder Roadless Areas include spectacular limestone massifs and caves as well as remnants of high volume old growth karstland forest. Calder and El Capitan Roadless Areas and adjacent developed lands contain internationally significant caves, including the deepest limestone pit in the United States, and spectacular karstlands that have been the site of important paleontological and archaeological discoveries. The commenters indicated that these Roadless Areas, 515, 516, and 517, together with contiguous karstlands in Roadless Area 518, could be combined to create a karst reserve/wilderness that would be renowned throughout the world.

A number of individuals identified the 1999 additions to the Calder Holbrook area as needing protection. Some commented on the need for protection for Shakan Bay. Some wanted the entire area protected as LUD II.

(2) Nearby Roadless and Wilderness Areas and Uses: The Calder Roadless Area is separated from the larger El Capitan Roadless Area (517) by a Forest Development road and harvest units. The Kosciusko Roadless Area (515) lies less than a mile to the south across Shakan Strait. The Kuiu Bay Wilderness lies approximately 10 miles to the west across the Sumner Strait. Recreation and subsistence are the main uses for these areas. The use levels of these areas are generally low.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	90	120
Wrangell (Pop. 2,308)	50	70
Petersburg (Pop. 3,324)	45	65
Juneau (Pop. 30,711)	145	160

Hollis, approximately 50 air miles and 125 road miles to the southeast, currently is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Calder Roadless Area is located on the northwest end of Prince of Wales Island. The roadless area is bounded on the north and east by areas developed for timber management. These roaded areas separate the Calder Roadless Area from the El Capitan Roadless Area (517). Calder Bay lies to the southeast. Sumner Strait lies to the west and Shakan Bay and Shakan Strait lie to the south. The area is characterized by the rugged terrain of Mount Calder, high energy coastline, alpine and subalpine, karst topography, and lower relief on the smaller islands just to the south. Mount Calder is the highest point, with an elevation of 3,400 feet. Numerous small streams drain to Shakan Bay. The small islands include the Barrier Islands in Sumner Strait and Hamilton, Divide, and Middle Islands in Shakan Bay, as well as numerous small islands and rocks along the coast.

The area generally appears natural and unmodified. The natural integrity is high and the apparent naturalness is very high. The opportunity for solitude is high and the opportunity for primitive recreation is very high.

The Calder Roadless Area has high scenic qualities; approximately 64 percent of the landscape is considered distinctive from a scenery standpoint. Karst and cave formation in the limestone and marbles underlying this roadless area may be of national significance because of their development, complexity, the resources they contain, and limited expanse. They are primarily in the Mount Calder Special Interest Area.

The roadless area includes about 6,083 acres of high-volume, old-growth forest. Of these acres, approximately 1,403 are mapped as high-volume, coarse-canopy old growth.

The Calder Roadless Area is classified as being in the North Central Prince of Wales Island Biogeographic Province and makes up about 1 percent of the province. It is one of 15 inventoried roadless areas found within the province which make up about 44 percent of the province. The Karta River Wilderness makes up about 3 percent of the province, and three designated LUD II areas (Mt. Calder-Mt. Holbrook, Pt. Baker-Pt. Protection, and Salmon Bay) make up about 5 percent of the province.

The Calder Roadless Area lies completely within the Kuiu-Prince of Wales Fjordlands Ecological Section and represents 1 percent of the ecological section. Approximately 13 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section is in existing wilderness, 8 percent is in existing LUD II, and an additional 33 percent is protected by other existing non-development LUDs.

Roughly two-thirds (63 percent) of the roadless area is in the North Prince of Wales Complex Ecological Subsection; this portion represents 9 percent of the entire ecological subsection, 28 percent of which is in existing LUD II and 18 percent is protected by existing non-development LUDs. The remaining 37 percent of the roadless area is in the North Prince of Wales-Kuiu Carbonates Ecological Subsection; this portion represents 2 percent of the entire ecological subsection, 2 percent of which is in existing LUD II and 25 percent is protected by other existing non-development LUDs.

The Calder Roadless Area was rated 22 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 38th from the highest (along with 8 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the roadless area in an unroaded condition, and some support for designating the area as a wilderness. Designation would create a relatively small wilderness that would contain areas of well-developed karst that also included important paleontological and cultural information. This would also include areas where extensive investigation and research is ongoing. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate to high.

V. Environmental Consequences

The Calder Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, or 4 is implemented. Approximately 91 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 9 percent of the roadless area. The land in the development LUDs includes an estimated 302 acres that are suitable for timber production (less than 1 percent of the suitable acres on the Thorne Bay Ranger District). Approximately 55 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 7 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. This area also contains an estimated 51 acres of undiscovered locatable mineral resources that are considered to have moderate potential for development. Karst and cultural resource investigation and research activities would continue. The recreation and special use programs would continue. The values associated with the natural settings of the roadless area are mostly protected by the existing LUD II and other non-development LUDs under the Forest Plan. The values could be affected along the eastern boundary where timber management activities are allowed. The high cultural, karst and most old-growth and scenic values are protected by the Forest Plan.

Under Alternatives 2, 5, and 7, all of the existing LUD II area would be converted to Recommended Wilderness. This would not affect timber sale projects because this area is currently allocated to a non-development LUD. The

area identified as suitable for timber production would not change from Alternative 1. Ongoing karst, cultural resource, recreation, special use, and minerals programs could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the existing LUD II portions of the roadless area, including the scenic, karst, old-growth, and cultural values, would continue to be provided long-term protection if designated wilderness.

Under Alternative 6, a 1,940-acre portion of the area would be converted to Recommended LUD II. This would convert all lands not currently designated as LUD II to Recommended LUD II. Ongoing karst, cultural resource, recreation, special use, and minerals programs would continue similar to current conditions with little restriction. No timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the scenic, karst, old-growth, and cultural values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed. Ongoing karst, cultural resource, recreation, special use, and minerals programs could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic, karst, old-growth, and cultural values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 516 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness		10,278			10,321		10,321	12,218
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area	791	791	791	791	774		774	
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat								
Semi-remote Recreation	25	25	25	25				
Recommended LUD II						1,940		
LUD II	10,278		10,278	10,278		10,278		
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	384	384	384	384	384		384	
Timber production	741	741	741	741	739		740	
TOTAL	**12,218**	**12,218**	**12,218**	**12,218**	**12,218**	**12,218**	**12,218**	**12,218**
Suitable Timber Lands	302	302	302	302	302	0	302	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: El Capitan (517)

ACRES (NFS): 30,854

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Kupreanof Lowlands, Kuiu-Prince of Wales Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 20

I. Overview and Description

(1) Location and Access: The El Capitan Roadless Area is located on the north end of Prince of Wales Island, approximately 48 air miles from Hollis, currently the closest stop on the Alaska Marine Highway. The roadless area is bounded by areas developed for timber production on all sides, making the boundaries of the roadless area easily accessible. One large lake in the roadless area is accessible by floatplane. There are no places suitable for landing wheeled vehicles. Access away from roads and lakes is by foot or helicopter. The Red Lake Trail is the only developed trail in the roadless area. This trail provides access to Red Bay Lake and the Red Bay Lake Cabin.

(2) History: Alaska Native people used this area in prehistoric and historic times. While no timber harvest has occurred within the roadless area, several harvest units are planned in this area as part of the Lab Bay project.

(3) Geography and Topography: The area is characterized by low elevation but rugged terrain. The maximum elevation is approximately 2,500 feet. Numerous small streams drain into Red Lake (the largest body of water within the roadless area). There are no glaciers and there is no saltwater shoreline. There are approximately 1,199 acres of alpine tundra, 726 acres of rock, and 458 acres of lakes.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the North Central Prince of Wales Island Province. This province is characterized by gentle relief in the landscape. All of the forest plant associations in Southeast Alaska, except those that are found only on the mainland, occur in this province. This area typically has high precipitation with karst topography and numerous caves. El Capitan Peak, Perue Peak, Virginia Mountain, and many of the unnamed mountains and ridges are underlain by marble and limestone into which extensive karst systems have developed. This roadless area has more rugged topography than is typical for the province.

Ecological Section/Subsection. The El Capitan Roadless Area is contained within the Kupreanof Lowlands Ecological Section (M247G) and the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F). These areas are represented by four ecological subsections (see table below). The Kuiu-Prince of Wales Granitics Ecological Subsection (39% of roadless area) contains rugged mountaintops of igneous rock that rise above rounded peaks, capturing incoming precipitation which remains as snowpack much of the year. Moderately productive hemlock forests are found below the alpine. The North Prince of Wales-Kuiu Carbonates Ecological Subsection (34% of roadless area) is characterized by low-elevation hills and mountain slopes underlain by limestone and marble karstlands. Hemlock and hemlock-spruce forests are found on karst soils, which can be highly productive. The North Prince of Wales Complex Ecological Subsection (25% of roadless area) is characterized by rolling hills and wide U-shaped valleys underlain by non-carbonate conglomerate and granodioritic rocks. Productive hemlock and hemlock-spruce forests comprise about two thirds of the landscape, and the remainder is low productive mixed-conifer and lodgepole pine forested wetlands (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kuiu-Prince of Wales Fjordlands	Kuiu-Prince of Wales Granitics	39%
	North Prince of Wales-Kuiu Carbonates	34%
	North Prince of Wales Complex	25%
Kupreanof Lowlands	Central Prince of Wales Till Lowlands	2%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock and are typically about 40 inches deep. Generally, steeper areas have better-drained soils and flat areas are poorly drained. Some of the soils in the area are derived from limestone.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with large components of cedar. Approximately 224 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Approximately 1,199 acres of alpine tundra are mapped for the area.

There are approximately 27,362 acres mapped as forest land of which 16,658 acres (61 percent) are mapped as productive old-growth forest. Of the productive old growth, 10,841 acres (65 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 3,808 acres of high-volume, coarse-canopy old growth. There are no acres of second-growth forest where timber harvest has occurred in the past.

(d) Fish Resources: The Anadromous Waters Catalogue (ADF&G, 2000) identifies Buster Creek, Big Creek, Geek Creek, Calder Creek, Flicker Creek, Alder Creek, Red Bay Creek, and Red Lake as the primary fish producing waters in this area. Pink, coho, chum, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char inhabit these waters.

(e) Wildlife Resources: Sitka black-tailed deer, black bear, wolves, mink, and bald eagles are the best known species that inhabit the area. Some moose inhabit Prince of Wales Island, but brown bear and mountain goats do not (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to five different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These five LUDs are Timber Production, Modified Landscape, Scenic Viewshed, Special Interest Area, and Old-growth Habitat Semi-remote Recreation.

LUD	Acres
Timber Production	14,497
Modified Landscape	3,337
Scenic Viewshed	1,750
Special Interest Area	7,419
Old-growth Habitat	3,851

Approximately 63 percent of this area was allocated to development LUDs, which allow timber harvest and the associated road construction (Timber Production, Modified Landscape, and Scenic Viewshed). The Timber Production LUD was assigned to approximately 47 percent of the roadless area. Approximately 11 percent of the roadless area was allocated to the Modified Landscape LUD, mostly along the northern boundary. Around Red Lake and Red Bay Mountain, approximately 6 percent of the roadless area was allocated to the Scenic Viewshed LUD.

Approximately 37 percent of the roadless area was allocated to a non-development LUD (Special Interest Area and Old-growth Habitat). In and around El Capitan Peak, Perue Peak, and Virginia Mountain, approximately 24 percent of the

roadless area was allocated to Special Interest Area LUD to recognize the extensive karst systems found there. Approximately 12 percent of the roadless area was allocated to the Old-growth Habitat LUD.

Current recreation use levels are not well documented except for use occurring at the Red Bay Lake Cabin, which totaled 74 visitors in fiscal year 2001. The only developed recreation facilities are the public recreation cabin located on Red Lake and the Red Bay Lake Trail. Fishing in Red Lake, Red Bay Creek, and Red Bay is popular. Floatplanes are sometimes used to transport cabin users to the Red Lake cabin. The cabin is also road accessible via a short trail to the lake edge, where a boat for cabin users is kept. One sightseeing guide operated in the roadless area in 2000 (2 service days). The roadless area is used for subsistence by residents of several communities on the northern half of Prince of Wales Island, especially Point Baker, Port Protection, and Whale Pass. VCUs 529 and 532 are rated among the VCUs having the highest community fish and wildlife values.

(6) Appearance (Apparent Naturalness): This area is essentially unmodified and in a natural condition. The only developments are the public recreation cabin on Red Lake and the Red Bay Lake Trail. However, the developments along the boundaries has affected the apparent naturalness of adjacent areas within the roadless area.

(7) Surroundings (External Influences): The adjacent areas in all directions have been developed. Roadless areas lie to the east, south, and west, across roaded and harvested lands. Non-National Forest System lands also lie to the south including the abandoned town of Calder and the Calder Marble Quarry owned and operated by Sealaska Timber Corporation.

(8) Attractions and Features of Special Interest: Red Lake, the Red Lake cabin, and the Red Bay Lake Trail are features of special interest. The unmodified landscape entails the natural integrity of the scenic, old-growth forest. Abundant wildlife is an attraction for wildlife viewing, fishing, hunting, and subsistence activities. The opportunity to study the processes which formed this country are of special interest. El Capitan Roadless Area contains 8 inventoried recreation places, which cover 11,065 acres (36 percent) of the roadless area. There is one improved trail within the area—the Red Bay Lake Trail.

Karst and cave systems have been formed in the limestone and marble formations on the west, east, and south sides of this roadless area may of which are in the Special Interest Area. These caves are nationally and internationally significant, based on previously established significance ratings.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: Ongoing developments have isolated this roadless area from Roadless Area 516 to the west and Roadless Area 518 to the east. The boundaries have been adjusted slightly as the result of more accurate mapping. Several smaller areas along developed boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the roadless area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: Due to the size of this roadless area and its rugged terrain, the natural integrity and apparent naturalness within the roadless area is high. Developments are evident along the edge. This "edge effect" will be evident in only a small number of places. The only developments within El Capitan Roadless Area are the Red Lake Cabin and the Red Bay Lake Trail. Neither of these developments noticeably affect the overall natural integrity and apparent naturalness of the area.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The opportunity for solitude and serenity, self-reliance, adventure, challenging experiences, and primitive recreation in this area is generally high, although the Red Bay Cabin and Trail create less of an opportunity for self-reliance, challenge, and solitude. The caves and steep karst terrain within this unroaded area create extensive opportunity for solitude and serenity, self-reliance, adventure, challenging experiences, and primitive recreation. Floatplanes used to transport people to the Red Lake cabin may occasionally disturb users. Current recreation use levels are not well documented. In 2000, one sightseeing guide operated in this area (2 service days).

The area primarily provides semi-primitive recreation opportunities. Most of these opportunities are located in the Red Lake area, the alpine country around Red Lake, Red Bay Mountain, and El Capitan Peak. The table below lists

the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	1,359	4%
Semi-Primitive Non-Motorized (SPNM)	21,374	69%
Roaded Natural (RN)	235	1%
Roaded Modified (RM)	8,154	26%

The area contains eight inventoried recreation places, which cover 11,065 acres (36 percent) of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	1	1,359
SPNM	3	8,138
RN	1	113
RM	6	1,455

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

The only developed recreation facilities are the public recreation cabin near Red Lake and the Red Lake Trail.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the El Capitan Roadless Area was 21 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 20, which reflects ongoing developments in the area.

(4) Ecologic and Geologic Values: Limestone and marble karst and cave formations underlying the west, east, and south sides of this roadless area are nationally and internationally significant because of their development, complexity, limited expanse, and the resources they contain. Many of these are in the El Capitan and Perue Peak Special Interest Area. The roadless area is not connected with other roadless areas or wildernesses.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 532 and 533 on the north side as primary sport fish producers and 537.1 as a primary salmon producer. Most of the area is listed as secondary salmon producers (ADF&G, 1998).

The Anadromous Waters Catalogue (ADF&G, 2000) identifies Buster Creek, Big Creek, Geek Creek, Calder Creek, and Red Lake and stream as the primary fish producing waters in this area. Pink, coho, chum, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char inhabit these waters. Red Bay Creek receives an estimated peak escapement of 41,800 pink salmon and has good coho production in VCU 533. Big Creek (VCU 538) receives 42,700 pink salmon annually (ADF&G, 1998).

(b) Wildlife Resources: Sitka black-tailed deer, black bear, wolves, mink, and bald eagles are the best known species that inhabit the area. Moose inhabit Prince of Wales Island, but brown bear and mountain goats do not (MacDonald and Cook, 1999).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species in the Tongass are the humpback whale (endangered) and the Steller sea lion (threatened), both marine species. There is no marine habitat available in the Thorne River Roadless Area. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Thorne Bay Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There is a large area of mostly high vulnerability karst encompassing the area between the west side of Red Lake and El Capitan Peak. A second area of mostly high vulnerability karst extends in a wide swath from Flicker and Alder Creek toward the east side of Calder Bay. Karst resources represent 10,534 acres (34 percent) of the roadless area, most of which is classified as high vulnerability karst. Caves have been located in the limestone formations on the west side of this roadless area. Limestone and marble karst and cave formations underlying the west, east, and south sides of this roadless area are nationally and internationally significant because of their development, complexity, limited expanse, and the resources they contain.

(5) Scientific and Educational Values: The El Capitan Roadless Area is located on the north end of Prince of Wales Island, approximately 48 air miles from Hollis, currently the closest stop on the Alaska Marine Highway. The roadless area is bounded by areas developed for timber production on all sides, making the boundaries of the roadless area easily accessible.

The level of karst development along the southern and western portions of this roadless area is similar to that found around El Capitan Cave. Extensive areas of limestone and marble are exposed from sea level to the ridge tops in these glaciated valleys. Karst development is extensive. Many caves have been inventoried here and a few have produced significant paleontological finds. Subalpine fir can be found on the ridge crests in protected alcoves. The karst systems found here extend from the alpine to the sea providing increased productivity for the plant, animal, and aquatic communities found on the karst lands.

(6) Scenic Values: This area is within the Kupreanof Lowlands character type, which is characterized by predominantly low, rolling relief, with elevations seldom greater than 1,500 feet. Numerous island groups are also common in this character type. This area generally possesses somewhat greater landform relief than is found in the character type. The outstanding scenic features in this area are the rugged terrain and rock faces to the east of Mount Calder, and the rugged landscapes at the head of the Red Lake valley. Once in the roadless area, visitors may see a landscape of developed areas or the untouched scenic landscape, depending on the visitor's location.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Sumner Strait, a tour ship route; the Shakan Strait, El Capital Pass and Dry Pass saltwater use areas; the Red Bay dispersed recreation use areas; the community of Point Baker; Red Lake public recreation cabin; and the Red Lake and El Capitan Cave hiking trails.

Approximately 9 percent of this area is in Varity Class A, which displays landscape diversity unique for the character type. El Capitan Mountain and Red Bay Mountain are some of the Variety Class A areas. About 91 percent of this area is inventoried as Variety Class B, which possesses landscape characteristics common for the character type.

Much of this area, about 60 percent, is inventoried in the Type I Existing Visual Condition (EVC), where the natural landscape has remained unaltered by human activity. About one percent of the area has an EVC II, where changes in the landscape are not noticeable to the average visitor unless pointed out. Another 2 percent of the area has an EVC III, where the average person notices changes in the landscape, but it does not dominate the landscape. Land

with an EVC IV is found in about 9 percent of this roadless area, in which alterations to the landscape are obvious but tend to blend with natural landscape features. Due to the extensive development along the edge of this area, about 29 percent of the area has a Type V EVC, in which changes to the landscape are obvious to the average visitor.

(7) Social, Cultural, and Historical Values: The area was used by prehistoric and historic cultures. The roadless area is used for subsistence by residents of several communities on the northern half of Prince of Wales Island, especially Point Baker, Port Protection, and Whale Pass. Demand exceeds supply for deer and bear. VCUs 529 on Summer Strait is rated among the VCUs having the highest community use values. All the VCUs are listed among the VUCs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998). The extensive karst development and caves within the roadless area elevate it to high sensitivity for cultural resources. Caves elsewhere in Southeast Alaska have contained highly significant archaeological resources.

(8) Manageability as Wilderness and Boundary Conditions/Changes: Areas developed for timber management define most of the boundaries for this roadless area rather than well-defined topographic features, creating an irregular shape. The influences of ongoing development (audio and visual) and general vehicle traffic quickly dissipate within a short distance into the roadless area. Feasibility of management in a roadless condition is moderate.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: The recreation and tourism potential of this area is high. Wildlife viewing, camping, hiking, caving, and exploring have the potential to increase as tourism and recreation increase throughout Alaska. Tourism potential is a major part of Alaska's economy. The industry attracts over 1.1 million visitors annually. There has been a growing recognition that tourism depends on scenic quality, wildlife, and wilderness (Behnke, 1999). The roadless area is approximately 100 road miles from Hollis, currently the closest stop on the Alaska Marine Highway. Good road access may contribute to recreation use of the roadless area. The area has good potential for low density, primitive recreation experiences. There is potential for trail construction to the alpine peaks at El Capitan and Red Mountain. Karst and cave development in the roadless area provide a unique opportunity to develop destination recreation facilities in association with interpretation and viewing of these features and topography. In 1996, the Alaska Visitors Association (AVA) proposed developing more trails and cabins at Red Bay. Agreements between the Thorne Bay Ranger District and the Community of Port Protection to construct a trail into the Perue Lake Basin have been developed.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: No fish habitat enhancement projects are currently planned within the roadless area.

(4) Wildlife Resources: No wildlife enhancement projects are currently planned within the roadless area.

(5) Timber Resources: There are 16,658 acres of productive old-growth forest and no acres of second-growth forest due to harvest mapped in the roadless area. Of this, approximately 5,769 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 3,046 acres or 10 percent of this roadless area are estimated to be suitable for timber production. Approximately 2,154 of the suitable acres are mapped as high-volume old growth; of these acres, 1,091 are mapped as high-volume, coarse-canopy old growth.

Managing timber in most of the roadless area would require extending the existing road system into the roadless area. This could easily be done since the existing peripheral area has an extensive road network and the necessary sites for transferring logs to saltwater. The Lab Bay project approved harvest units and the roads needed to access them. The Big Bob Sale and the Ridge Sale is under contract but not implemented; additional sales are NEPA approved and planned to be offered for sale.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: Mineral development may be of potential importance because of the known, but undeveloped, deposits of marble. This area contains 8,024 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). In addition, this area contains 14,511 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have moderate potential for development.

The Calder Marble Quarry, owned and operated by Sealaska Corporation, is currently being operated adjacent to this roadless area. Several historic small mines and prospects are found along the southern boundary of the area. Mineralization associated with the placement of the Red Bay Batholith can be found throughout the eastern half of the roadless area.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area. There is a major road corridor along the eastern and northern boundaries of the roadless area, linking the north end of Prince of Wales Island with Hollis and other communities.

(9) Water Availability and Use: The Red Bay Lake cabin, a local lodge, and homesites on private land along the north shore of El Capitan Passage use water that comes from this area. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: Karst and cave formation in the limestone and marbles underlying the west, east, and south side of this roadless area, particularly in the Special Interest Area, may be of national significance because of their development, complexity, limited expanse, and the resources they contain. Management as wilderness may restrict research activities in the area. The mapped karst resources encompass approximately 10,534 acres or 34 percent of the roadless area.

(11) Land Use Authorizations: Outfitter guide permitting is ongoing.

(12) Land Status: This entire area is National Forest System land.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Local residents are primarily concerned with maintaining the area for recreation and subsistence use.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. The roadless area was not one of these areas. In 2001, HR 2908 proposed managing the entire roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The Southeast Alaska Conservation Council stated that the area merited special protection for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. Pt. Baker and Pt. Protection residents and the Sumner Strait Fish and Game Advisory Board requested that the area be dedicated to subsistence use. The Alaska Forest Association, the Alaska Miners Association, and the AVA recommended that no new wilderness be designated on the Tongass National Forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber. In 1996, the AVA proposed developing additional trails and cabins at Red Bay.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless

Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless area have been identified.

(f) Public Input Expressed During Supplemental EIS Process: The city of Petersburg said they were opposed to designation of this area as wilderness because of the potential long-term economic impacts on the city.

SEACC recommended this area be designated as LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 517 for permanent protection as LUD II.

A number of cave/karst experts and other individuals stated that the North Central Prince of Wales Biogeographic Province contains the most celebrated and explored caves and karstlands in the Tongass. Calder and El Capitan Roadless Areas and adjacent developed lands contain internationally significant caves, including the deepest limestone pit in the United States, and spectacular karstlands that have been the site of important paleontological and archaeological discoveries. The commenters indicated that these Roadless Areas, 515, 516, and 517, together with contiguous karstlands in Roadless Area 518, could be combined to create a karst reserve/wilderness that would be renowned throughout the world.

One individual wanted protection for the 17,000 acres of ridges and alpine that link Red Mountain to Peru Peak.

(2) Nearby Roadless and Wilderness Areas and Uses: The El Capitan Roadless Area is separated from other roadless areas by developed areas. The Kosciusko Roadless Area (515) lies approximately 2 miles to the south on Kosciusko Island. The Calder Roadless Area (516) lies less than a mile to the west. The Salmon Bay Roadless Area (518) lies 1 to 2 miles to the east. The closest wilderness is the Kuiu Wilderness, which is approximately 10 miles to the northwest on Kuiu Island. Recreation and subsistence are the major uses for these areas. The use levels for these areas are not well documented.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	85	130
Wrangell (Pop. 2,308)	45	25
Petersburg (Pop. 3,324)	40	45
Juneau (Pop. 30,711)	145	160

Hollis, approximately 48 air miles to the south on the Prince of Wales Island, is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The El Capitan Roadless Area is located on the north end of Prince of Wales Island. The roadless area is bounded by areas that were developed for timber management on all sides. The area is characterized by low elevation but rugged terrain. The maximum elevation is 2,500 feet. Numerous small streams drain into Red Lake, the largest body of water within the area.

The El Capitan Roadless Area is unmodified and natural appearing; however, it is influenced by the developments that form all of its borders. The natural integrity and apparent naturalness is high. The opportunity for solitude and primitive recreation is also high in the area.

The area has moderate scenic qualities; approximately 9 percent of the landscape is considered distinctive from a scenery standpoint. Limestone and marble karst and cave formations underlying the west, east, and south sides of

this roadless area are nationally and internationally significant because of their development, complexity, limited expanse, and the resources they contain. Many of these are in the El Capitan and Perue Peak Special Interest Areas.

The roadless area includes about 10,841 acres of high-volume, old-growth forest. Of these acres, approximately 3,808 are mapped as high-volume, coarse-canopy old growth.

The El Capitan Roadless Area is classified as being in the North Central Prince of Wales Island Biogeographic Province and makes up about 2 percent of the province. It is one of 15 inventoried roadless areas found within the province which make up about 44 percent of the province. The Karta River Wilderness makes up about 3 percent of the province, and three designated LUD II areas (Mt. Calder-Mt. Holbrook, Pt. Baker-Pt. Protection, and Salmon Bay) make up about 5 percent of the province.

The El Capitan Roadless Area lies within two ecological sections; it represents 3 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section and 0.1 percent of the Kupreanof Lowlands Ecological Section. Both of these ecological sections contain relatively small areas in existing wilderness (13 and 1 percent, respectively) and existing LUD II (8 and 1 percent, respectively), but are well represented by other existing non-development LUDs (33 percent each).

Thirty-nine percent of the roadless area is in the Kuiu-Prince of Wales Granitics Ecological Subsection; this portion of the roadless area represents 8 percent of the entire ecological subsection, 19 percent of which is protected in existing wilderness, 23 percent in existing LUD II, and 36 percent in other existing non-development LUDs. One-third (34 percent) of the roadless area is in the North Prince of Wales-Kuiu Carbonates Ecological Subsection; this portion of the roadless area represents 4 percent of the entire ecological subsection, 2 percent of which is in existing LUD II and 25 percent is protected by other existing non-development LUDs. One-quarter (25 percent) of the roadless area is in the North Prince of Wales Complex Ecological Subsection; this portion of the roadless area represents 9 percent of the entire ecological subsection, 28 percent of which is in existing LUD II and 18 percent is protected by existing non-development LUDs. The remainder (2 percent) of the roadless area is in the Central Prince of Wales Till Lowlands Ecological Subsection; this portion of the roadless area represents 0.2 percent of the entire ecological subsection. None of this ecological subsection is in existing wilderness, but 3 percent is in LUD II, and an additional 42 percent is protected by other existing non-development LUDs.

The El Capitan Roadless Area was rated 20 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 53rd from the highest (along with 16 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the roadless area in an unroaded condition, and some support for designating the area as a wilderness. Designation would create a wilderness that would contain areas of well-developed karst that also included important paleontological and cultural information, and where extensive investigation and research is ongoing. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate.

V. Environmental Consequences

The El Capitan Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 36 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 64 percent of the roadless area. The land in the development LUDs includes an estimated 3,046 acres that are suitable for timber production (2 percent of the suitable acres on the Thorne Bay Ranger District). Approximately 1,091 of the suitable acres are classified as high-volume, coarse-canopy old growth. Mineral development may be of potential importance because of the known, but undeveloped, deposits of marble. This area contains 8,024 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains an estimated 14,511 acres of undiscovered locatable mineral resources that are considered to have moderate potential for development. Timber sales, most of which are under contract, authorized under the Lab Bay FEIS, would continue. Karst and cultural resource investigation and research activities would continue. The minerals, recreation, and special use programs would continue. The values associated with the natural settings of the roadless

area could be affected by ongoing developments allowed by the Forest Plan. The high karst and cultural values, and most old-growth values, are protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. Ongoing karst, cultural resource, recreation, special uses, and minerals programs would continue with little restriction. No timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the cultural, scenic, old-growth, and karst values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. No timber harvest would be allowed. Ongoing karst, cultural resource, recreation, special use, and minerals programs could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the cultural, scenic, old growth, and karst values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 517 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								30,854
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area	7,419	7,419	7,419	7,419	7,419		7,419	
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	3,851	3,851	3,851	3,851	3,851		3,851	
Semi-remote Recreation								
Recommended LUD II						30,854		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	1,750	1,750	1,750	1,750	1,750		1,750	
Modified Landscape	3,337	3,337	3,337	3,337	3,337		3,337	
Timber production	14,497	14,497	14,497	14,497	14,497		14,497	
TOTAL	**30,854**	**30,854**	**30,854**	**30,854**	**30,854**	**30,854**	**30,854**	**30,854**
Suitable Timber Lands	3,046	3,046	3,046	3,046	3,046	0	3,046	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Salmon Bay (518)

ACRES (NFS): 27,412

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Kupreanof Lowlands, Kuiu-Prince of Wales Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 20

I. Overview and Description

(1) Location and Access: The Salmon Bay Roadless Area is located on the north end of Prince of Wales Island. It is approximately 50 air miles north of Hollis, currently the closest stop on the Alaska Marine Highway. Sumner Strait lies to the north, and Clarence Strait lies to the east. The roadless area is bounded by areas developed for timber management on the west and south, and there are pockets of developed areas in the north and east. The area is accessed by floatplane or boat from saltwater at Salmon Bay, California Bay, and Red Bay and by forest roads at many points near the boundaries. Floatplanes can also access Salmon Bay Lake. There are no places suitable for landing wheeled airplanes. Access away from roads and water is by foot or helicopter. There is a public recreation cabin located on Salmon Bay Lake. The Salmon Bay Lake Trail is the only developed trail in the roadless area and it connects the lake with Salmon Bay but does not provide access to the cabin.

(2) History: The coastal portion of the Salmon Bay Roadless Area has been used by humans in prehistoric and historic times. The Salmon Bay area was the site of fish canneries in the early 1900s. The northern part of the roadless area has been prospected for rare earth minerals. Beach logging has modified most of the forest along the saltwater shores.

(3) Geography and Topography: The area is characterized by low elevation but rugged terrain. The maximum elevation is 2,000 feet. Numerous small streams drain to Salmon Bay Lake, the largest body of fresh water in the roadless area. There are 49 miles of saltwater shoreline, 1,135 acres of islands, 32 acres of rock, 219 acres of alpine, and 1,040 acres of lakes.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the North Central Prince of Wales Island Province. This province is characterized by gentle relief in the landscape. All of the forest plant associations in Southeast Alaska except those that are found only on the mainland occur in this province. This area typically has high precipitation, karst topography in which caves are common, and numerous wetlands.

Ecological Section/Subsection. The Salmon Bay Roadless Area is contained within the Kupreanof Lowlands Ecological Section (M247G) and the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F). These areas are represented by three ecological subsections (see table below). The Central Prince of Wales Till Lowlands Ecological Subsection (54% of roadless area) is characterized by gentle undulating terrain comprised of deep organic till that supports vast wetland complexes. Low productive forested wetlands cover almost half of the landscape and hemlock forests exist in the smaller portion of well-drained mineral soils on hillslopes. The North Prince of Wales Complex Ecological Subsection (41% of roadless area) is characterized by rolling hills and wide U-shaped valleys underlain by non-carbonate conglomerate and granodioritic rocks. Productive hemlock and hemlock-spruce forests comprise about two thirds of the landscape, and the remainder is low productive mixed-conifer and lodgepole pine forested wetlands. The North Prince of Wales-Kuiu Carbonates Ecological Subsection is characterized by low-

elevation hills and mountain slopes underlain by limestone and marble karstlands. Hemlock and hemlock-spruce forests are found on karst soils, which can be highly productive (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kupreanof Lowlands	Central Prince of Wales Till Lowlands	54%
Kuiu-Prince of Wales Fjordlands	North Prince of Wales Complex	41%
	North Prince of Wales-Kuiu Carbonates	5%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock and are typically about 40 inches deep. Generally, steeper areas have better-drained soils, and flat areas are poorly drained. Some of the soils in the area are derived from limestone.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with large components of cedar. Approximately 1,294 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Wetland soils also play a major role in vegetative development within the roadless area.

There are approximately 24,719 acres mapped as forest land of which 11,157 acres or 45 percent are mapped as productive old-growth forest. Of the productive old growth, 3,989 acres or 36 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,733 acres of high-volume, coarse-canopy old growth. There are 685 acres of second growth which is associated with older beach logging.

(d) Fish Resources: Sockeye, coho, pink, and chum salmon, cutthroat, steelhead and rainbow trout, and Dolly Varden char inhabit the waters of this roadless area. The Anadromous Waters Catalogue (ADF&G, 2000) identifies the primary fish-bearing waters as Salmon Bay Lake and stream, Red Bay streams, White Sox Creek, Pine Creek, Salmon Bay Lake, and Exchange Lake (ADF&G, 2000).

(e) Wildlife Resources: Sitka black-tailed deer, black bear, wolves, mink, marten, otters, and bald eagles are among the species that inhabit the area. Moose inhabit Prince of Wales Island, but brown bear and mountain goats do not (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to six different Land Use Designations (LUDs), under the 1997 Tongass Land and Resource Management Plan. These six LUDs are Modified Landscape, Timber Production, Scenic Viewshed, LUD II, Old-growth Habitat, and Semi-remote Recreation.

LUD	Acres
Modified Landscape	6,966
Timber Production	3,546
Scenic Viewshed	1,854
Old-growth Habitat	3,783
LUD II (including LUD II/Wild and Scenic River)	11,076
Semi-remote Recreation	187

Approximately 45 percent of the roadless area was allocated to a development LUD, which allows timber harvest and the associated road construction (Modified Landscape, Timber Production, and Scenic Viewshed). In the western part of the roadless area, approximately 25 percent of the roadless area was allocated to the Modified Landscape LUD. Approximately 13 percent of the roadless area was allocated to the Timber Production LUD. The Scenic Viewshed LUD was assigned to approximately 7 percent of the roadless area.

Much of this roadless area, 55 percent, was allocated to a non-development LUDs (LUD II, Old-growth Habitat, LUD II/Wild and Scenic River, and Semi-remote Recreation). Approximately 40 percent of the roadless area was allocated to the LUD II designation, creating the Salmon Bay LUD II area. In and around Salmon Bay Lake, approximately 11 percent of the area allocated to LUD II was also allocated to the Wild and Scenic River LUD and is managed under both designations. Approximately 4 river miles of Salmon Bay Lake and Stream are wild, and approximately 2 river miles are scenic. The Old-growth Habitat LUD was assigned to 14 percent of the roadless area. Approximately 1 percent of the roadless area was allocated to the Semi-remote Recreation LUD. This LUD includes the small islands associated with the roadless area that were not allocated to LUD II.

There is a public recreation cabin at the north end of Salmon Bay Lake and a developed trail that accesses the lake from Salmon Bay. In 2000, two outfitter/guides operated in this area, providing sightseeing (two service days) and freshwater fishing (two service days). The roadless area is used for subsistence by residents of several communities on the northern half of Prince of Wales Island, especially Point Baker, Port Protection, and Whale Pass. None of the VCUs in the roadless area are listed among the VCUs with the highest community fish and wildlife values.

(6) Appearance (Apparent Naturalness): The area is unmodified and in a natural condition except for the public recreation cabin at Salmon Bay Lake and the trail to the lake. Remnants of a fish weir and associated structures such as tent platforms, outhouse, and building from ADF&G fish surveys are located at the mouth of Salmon Bay Creek. Most of the northern and eastern shoreline has been beach logged in the past, but no longer appears modified as vegetation has regrown.

(7) Surroundings (External Influences): The adjacent coastal areas to the north and east have been beach logged with little or no roading; however, areas to the west and south have been extensively roaded. There is a narrow strip of developed land that forms the western boundary of this roadless area and separates this roadless area from the El Capitan Roadless Area that lies to the west. There is a small area of non-National Forest System land along the north shore and a larger area in the southwest that has been developed.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, rich cultural history, especially around Salmon Bay, and the opportunity to see wildlife and to study the processes which formed this country may all be attractions. The outstanding stream and lake fishing and solitude of the Salmon Bay Lake area are an attraction. The area contains 10 inventoried recreation places, which cover 13,048 acres, or 48 percent of the roadless area. The public recreation cabin at Salmon Bay Lake and the trail that accesses the lake from Salmon Bay are attractions.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: There have been several changes to the roadless area boundaries since 1989. Areas in the south and west that now have been developed are no longer part of the roadless area. A small area in the north and a larger area in the southwest are no longer National Forest System lands and are no longer part of the roadless area. Areas along the shore that were beach logged several decades ago but not roaded have been included in the roadless area. Also, the boundaries have been adjusted slightly as the result of more accurate mapping. Several smaller areas along the developed boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the roadless area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified and in a natural condition except for the public recreation cabin and the trail that provides access from Salmon Bay Lake to Salmon Bay. Areas along the shore that were beach logged several decades ago appear natural now that trees have regrown. Timber harvest and other management activities concentrated on the south and southeast are seldom viewed from major use areas such as the cabin, Salmon Bay Lake, the trail, and anchorage, but can be viewed from high elevation peaks along the boundaries of the roadless area. However, the developments that form most of the exterior boundaries of the roadless area affect the area little, so that it can exhibit moderate to high natural integrity and apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a high to very high mix of opportunity for solitude and serenity, self-reliance,

adventure, challenging experiences, and primitive recreation within the roadless area. These opportunities are especially high in the northeastern and coastal portions of the roadless area. The coastal areas are remote and primitive, with isolated and deserted islands, extreme tides, challenging ocean currents, no nearby towns, and few travelers. Primitive recreation opportunities are abundant and may include fishing, hiking, camping, caving, hunting, and sea kayaking. These opportunities may diminish within the southern portion of the roadless area where ongoing timber management activities have occurred and are planned. Timber sales and associated activities are scheduled for some areas southeast of Salmon Bay Lake. These activities may be periodically heard near the lake. Floatplanes transporting people to the Salmon Bay Lake cabin may disturb others using the lake area for brief periods. Present recreation use levels are not well documented except for the Salmon Bay cabin, which received 40 visitors in fiscal year 2001. A person camped within the area is unlikely to see others. In 2000, two outfitter/guides operated in this area, providing sightseeing and freshwater fishing services.

The dense vegetation typical in Southeast Alaska, the rugged terrain, and the presence of black bears contribute to the challenging experiences when hiking or camping in the area. As with all backcountry areas on the Tongass, the opportunity for challenge and risk in this area is high. The climate, the isolation, the distance from population centers with medical facilities, the barriers to communication, and the presence of large wild animals all contribute to the need for good preparation and knowledge of backcountry survival skills for anyone using this area. Hypothermia and bear encounters are just two examples of the many risks that must be considered before traveling in the backcountry of southeast Alaska.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	2,883	11%
Semi-Primitive Non-Motorized (SPNM)	17,225	63%
Semi-Primitive Motorized (SPM)	1,383	5%
Roaded Natural (RN)	96	0%
Roaded Modified (RM)	5,798	21%

The area contains 10 inventoried recreation places, which cover 13,048 acres, or 48 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
Primitive	0	0
SPNM	3	10,330
SPM	3	615
RN	1	96
RM	8	2,007

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

The only developed recreation facilities in the roadless area are the public recreation cabin at Salmon Bay Lake and the trail that accesses the lake from Salmon Bay. There are outstanding dispersed recreation opportunities in the Salmon Bay and Salmon Bay Lake area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in

support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Salmon Bay Roadless Area was 21 out of 28 possible points. The 1989 rating was reevaluated for this updated version of the AMS. Based on this reevaluation, the area was given a rating of 20. The difference is reflective of changes in size of the roadless area caused by ongoing developments in the vicinity of the roadless area.

(4) Ecologic and Geologic Values: The roadless area contains important wintering habitat for waterfowl, including trumpeter swans, and for black bear. The roadless area also contains karst features. The North Prince of Wales Road and associated developments separate the Salmon Bay Roadless Area from the El Capitan Roadless Area (517) to the west.

(a) Fish Resources: Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 532 and 534.1 as primary sport fish producers. No VCUs were listed as primary salmon producers.

Sockeye, coho, pink and chum salmon, cutthroat, steelhead and rainbow trout, and Dolly Varden char inhabit the waters of this roadless area. The Anadromous Waters Catalogue (ADF&G, 2000) identifies the primary fish-bearing waters as Salmon Bay Lake and stream, White Sox Creek, Pine Creek, Salmon Bay Lake, and Exchange Lake (ADF&G, 2000). Sockeye, coho, pink, and chum salmon, cutthroat trout, and Dolly Varden char inhabit White Sox Creek.

Salmon Bay Lake and Stream are rated “outstandingly remarkable” for their regionally significant fishery. ADF&G lists this system among the 65 “important” watersheds in Southeast Alaska. All species of Pacific salmon except chinook are found in the river, as well as cutthroat and rainbow trout and Dolly Varden char. The lake and stream have a steelhead run of about 100 adult fish. Salmon Bay Creek receives an estimated peak escapement of 4,400 pink salmon and has good coho production (ADF&G, 1998).

(b) Wildlife Resources: Sitka black-tailed deer, black bear, wolves, mink, marten, otters, and bald eagles are among the species that inhabit the area. Moose inhabit Prince of Wales Island, but brown bear and mountain goats do not (MacDonald and Cook, 1999). The area between Salmon Bay Lake and saltwater contains a major intertidal grassflat, which is frequented by wintering waterfowl, including trumpeter swans, and black bear (TLMP, 1997). Based on data compiled from 1985 to 1994, VCU 532 along Red Bay is listed among the top 25 percent of VCUs for black bear harvest and VCU539, further south, is listed in the second 25 percent (ADF&G 1998).

(c) Threatened, Endangered, and Sensitive Species. The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale’s peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Trumpeter swans winter at Salmon Bay Lake. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale’s peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Thorne Bay Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are karst resources in this roadless area encompassing 3,651 acres, or 13 percent of the area, most of which is low vulnerability. There is also one band of low vulnerability karst in this roadless area, running along the Pine Creek drainage. There are no glaciers or unique geologic features in the area.

(5) Scientific and Educational Values: There are opportunities to study wildlife, especially wintering waterfowl, fish, and karst formations. There are no nearby educational institutions.

(6) Scenic Values: This roadless area is part of the Kupreanof Lowlands Character Type which is characterized by predominantly low rolling relief, with elevations seldom greater than 1,500 feet. Numerous island groups and intricate waterways are also common in this character type. This area with the low rolling relief around Salmon Bay Lake and the coastal features is very representative of this character type. Salmon Bay Lake and Stream have been recommended for Wild and Scenic River designation primarily for their scenic values.

The roadless area appears predominately unmodified when viewed from the priority routes listed in the Forest Plan. Once in the roadless area, visitors occasionally may see a landscape of timber harvest and road activity or more often the natural scenic landscape, depending on the visitor's location. The special features of this area are centered around Salmon Bay, with its diverse island groups, grass flats, intricate shorelines, and saltwater channels. A large sand beach and views of the alpine scenery of Maggie Mountain are seen from the Salmon Lake cabin.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Sumner Strait, a tour ship route; Salmon Bay State Marine Park; the Salmon Bay Lake and stream, which are recommended for Wild and Scenic River designation; Salmon Bay, Red Bay and the beach areas on north Prince of Wales Island, which are dispersed recreation areas; the Salmon Bay Lake public recreation cabin; the Salmon Bay Lake Hiking Trail; and the Salmon Bay boat anchorage.

About 6 percent of the area was rated as Variety Class A, possessing a high degree of landscape diversity. These Class A landscapes are located around Salmon Bay. About 64 percent of this area was inventoried as Variety Class B, possessing landscape diversity common for the character type. About 29 percent was rated as Variety Class C, which has a minimal degree of landscape diversity relative to the character type. Approximately 2 percent of the area was not rated for Variety Class type.

About 76 percent of the area is in Type I Existing Visual Condition (EVC) where the natural landscape has remained unaltered by the human activity. About 2 percent of the area has an EVC II, where changes in the landscape are not noticeable to the average visitor unless pointed out. Eight percent of the area has an EVC III, where the average person notices changes in the landscape, but this does not dominate the landscape. Land with an EVC IV is found in another 7 percent of the area, where alterations to the landscape are obvious but tend to blend with natural landscape features. Due to the extensive development along the edge of this area, about 5 percent of the area has a Type V EVC, where changes to the landscape are obvious to the average visitor. Approximately 2 percent of the area was not rated for EVC.

(7) Social, Cultural, and Historical Values: The coastal portion of the Salmon Bay Roadless Area has been used by humans in prehistoric and historic times. The Salmon Bay area was the site of fish canneries in the early 1900s. The northern part of the roadless area has been prospected for rare earth minerals. Beach logging has modified most of the forest along the saltwater shores. The roadless area is used for subsistence by residents of several communities on the northern half of Prince of Wales Island, especially Point Baker, Port Protection, and Whale Pass and by residents of Wrangell due to its proximity and ease of access. VCU 532 along Red Bay is listed among the VCUs with the highest community use value, and almost all VCUs (not including 534.2 in the northeast corner of the island) are listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: Developed areas form the boundaries of this roadless area, except for the north and northeast along the shores of Sumner Strait and Clarence Strait. The influences of these developments (sights and sounds), as well as noise from general vehicle traffic outside the area, affect the apparent naturalness of the southern portion of this roadless area. Management of this area in a roadless condition is feasible but could be improved if topographic features surrounding the Salmon Bay LUD II area were used as the boundaries instead of the current boundaries.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska attracting over 1.1 million visitors annually. This trend in tourism is expected to continue to increase. Wildlife viewing,

camping, hiking, caving, sea kayaking, fishing, hunting, and exploring have the potential to increase as tourism and recreation increase throughout Alaska. The roadless area is approximately 100 miles by road from Hollis, currently the closest stop on the Alaska Marine Highway. There are also plans to add a terminal in Coffman Cove that would provide service between Coffman Cove and Wrangell, providing closer access to this roadless area. Good road access may encourage many of the tourists visiting the island to recreate in the roadless area. The area has good potential for low density, primitive recreation experiences. There is potential for additional trails connecting Salmon Bay Lake to saltwater and connecting the logging road system to the southern end of Salmon Bay Lake. There is potential for one additional recreation cabin at Salmon Bay Lake. In 1996, the Alaska Visitors Association (AVA) proposed developing trails and cabins in Salmon Bay.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: No fish habitat enhancement projects are planned within the roadless area.

(4) Wildlife Resources: No wildlife habitat enhancement projects are planned within the roadless area.

(5) Timber Resources: There are 11,157 acres inventoried as productive old-growth forest and 685 acres of second-growth forest in the roadless area. Of this, approximately 5,079 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,682 acres (6 percent) of this roadless area are estimated to be suitable for timber production. Approximately 458 of the suitable acres are mapped as high-volume old growth; of these acres, 142 are mapped as high-volume, coarse-canopy old growth.

Managing timber in most of the roadless area would require extending the existing road system into the roadless area. This could easily be done since the existing peripheral area has an extensive logging road network and the necessary sites for transferring logs to saltwater. The Lab Bay project approved harvest units and the roads needed to access them. Several timber sales are planned.

(6) Fire, Insects, and Disease: The area has no known fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: There is no current mining, and no known prospecting is being conducted within this roadless area. The northern part of this area is known to contain some rare earth minerals including uranium (USGS, 2001). This area contains an estimated 2,658 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); all of these acres are considered to have moderate potential for development.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area. There is a major road corridor along the western boundary of the roadless area, linking the north end of Prince of Wales Island with Hollis and other communities.

(9) Water Availability and Use: The only water demand in the roadless area comes from the public recreation cabin on Salmon Bay Lake. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The grass flats near Salmon Bay and the wintering waterfowl that they support are of scientific interest. Karst features may also be of interest. The mapped karst resources encompass approximately 3,651 acres or 13 percent of the roadless area.

(11) Land Use Authorizations: There are no land use authorizations within the roadless area.

(12) Land Status: All of the roadless area is National Forest System land. Two small areas in Salmon Bay have encumbrances.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Local residents are primarily concerned with maintaining the area for recreation and subsistence use.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. A portion of the roadless area was designated LUD II by the Tongass Timber Reform Act. In 2001, HR 2908 proposed managing the entire roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The Southeast Alaska Conservation Council recommended that the area be managed to preserve its integrity. They stated that the area merited special protection for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. Point Baker and Port Protection residents and the Sumner Strait Fish and Game Advisory Board requested that the area be dedicated to subsistence use. The Juneau Convention and Visitors Bureau recommended that the area be managed to support high-quality sport fishing. The Petersburg Fish and Game Advisory Board and the Narrows Conservation Council recommended that the entire Salmon Bay watershed be protected from logging and road building because of unstable soils, subsistence, fisheries, and recreation resources, old-growth habitat, high populations of fish and wildlife, and commercial and sport fishing. Others recommended that the area outside of the LUD II boundary be logged. The Narrows Conservation Council also recommended the fullest protection as a Wild and Scenic River. The Alaska Forest Association, the Alaska Miners Association, and the AVA recommended that no new wilderness be designated on the Tongass National Forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber. In 1996, the AVA proposed developing trails and cabins at Salmon Bay.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless area have been identified.

(f) Public Input Expressed During Supplemental EIS Process: The city of Petersburg said they were opposed to designation of this area as wilderness because of the potential long-term economic impacts on the city.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

SEACC recommended this area be designated as LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 518 for permanent protection as LUD II.

A number of cave/karst experts and other individuals stated that the North Central Prince of Wales Biogeographic Province contains the most celebrated and explored caves and karstlands in the Tongass. The Salmon Bay Roadless Area contains karstlands that are contiguous with those in the El Capitan area. The commenters indicated that these karstlands could be combined with Roadless Areas 515 and 516 to create a karst reserve/wilderness that would be renowned throughout the world.

A number of individuals identified the 1999 additions to the Salmon Bay Lake area as needing protection. One commented on the need for permanent protection for Red Bay and Salmon Bay Lake. One wanted permanent protection of the entire area as LUD II.

(2) Nearby Roadless and Wilderness Areas and Uses: The Salmon Bay Roadless Area is separated from other roadless areas by developed areas. The Kosciusko Roadless Area (515) lies approximately 4 miles to the southwest on Kosciusko Island. The El Capitan Roadless Area (517) lies 1 to 2 miles to the west. The closest wilderness is the Kuiu Wilderness, approximately 18 miles to the northwest on Kuiu Island. Recreation and subsistence are the major uses for these areas. Use levels are generally low.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	80	90
Wrangell (Pop. 2,308)	35	35
Petersburg (Pop. 3,324)	35	40
Juneau (Pop. 30,711)	145	170

Hollis, approximately 50 air miles to the south on Prince of Wales Island, currently is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Salmon Bay Roadless Area is located on the north end of Prince of Wales Island. Sumner Strait lies to the north and Clarence Strait lies to the east. The roadless area is bounded by areas developed for timber management on the west and south, and there are pockets of developed areas in the north and east. The area is characterized by low elevation but rugged terrain. The maximum elevation is 2,000 feet. Numerous small streams drain to Salmon Bay Lake, the largest body of water in the area.

The area is unmodified and in a natural condition; however, it is heavily influenced along most of its borders. The natural integrity of the area is moderate, and the apparent naturalness is rated high. The opportunity for solitude is high, and the opportunity for primitive recreation is very high.

The area has moderate scenic quality; approximately 6 percent of the landscape is considered distinctive from a scenery standpoint. Salmon Bay Lake and Stream are the most prominent features of this roadless area, and most of their drainage is designated as LUD II.

The roadless area includes about 3,989 acres of high-volume, old-growth forest. Of these acres, approximately 1,733 are mapped as high-volume, coarse-canopy old growth.

The Salmon Bay Roadless Area is classified as being in the North Central Prince of Wales Island Biogeographic Province and makes up about 2 percent of the province. It is one of 15 inventoried roadless areas found within the province, which make up about 44 percent of the province. The Karta River Wilderness makes up about 3 percent of the province, and three designated LUD II areas (Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and Salmon Bay) make up about 5 percent of the province.

The Salmon Bay Roadless Area lies within two ecological sections; it represents 1 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section and 1 percent of the Kupreanof Lowlands Ecological Section. Both of these ecological sections contain relatively small areas in existing wilderness (13 and 1 percent, respectively) and existing LUD II (8 and 1 percent, respectively), but are well represented by other existing non-development LUDs (33 percent, each).

Approximately half (54 percent) of the roadless area is in the Central Prince of Wales Till Lowlands Ecological Subsection; this portion of the roadless area represents 6 percent of the entire ecological subsection. None of this ecological subsection is in existing wilderness, but 3 percent is in LUD II, and an additional 42 percent is protected by other existing non-development LUDs. Forty-one percent of the roadless area is in the North Prince of Wales Complex Ecological Subsection; this portion represents 14 percent of the entire ecological subsection, 28 percent of which is in existing LUD II and 18 percent is protected by other existing non-development LUDs. Five percent of the roadless area is in the North Prince of Wales-Kuiu Carbonates Ecological Subsection; this portion represents 1

percent of the entire ecological subsection, 2 percent of which is in existing LUD II and 25 percent is protected by other existing non-development LUDs.

The Salmon Bay Roadless Area was rated 20 out of a possible 28 points under WARS. As such, its WARS rating is ranked 53rd from the highest (along with 16 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the roadless area in an unroaded condition and some support for designating the area as a wilderness. Designation would create a wilderness that would include the Salmon Bay Lake watershed and its associated recreation developments and uses. The roadless area includes timber harvest areas authorized under the Lab Bay FEIS to the east of the Salmon Bay watershed. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate.

V. Environmental Consequences

The Salmon Bay Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, or 4 is implemented. Approximately 55 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 45 percent of the roadless area. The land in the development LUDs includes an estimated 1,682 acres that are suitable for timber production (1 percent of the suitable acres on the Thorne Bay Ranger District). Approximately 142 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains an estimated 2,658 acres of undiscovered locatable mineral resources; all of these acres are considered to have moderate potential for development. The timber sale located on the eastern portion of the roadless area would continue. The recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area could be affected by ongoing activities allowed by the Forest Plan. The karst values and most of the old growth and scenic values are protected by the Forest Plan.

Under Alternative 2, all of the existing LUD II area would be converted to Recommended Wilderness LUD. This would not affect timber sales projects because this area is currently allocated to a non-development LUD and the area suitable for timber production would not change from Alternative 1. Ongoing recreation, special use, and minerals programs could be restricted in the Recommended Wilderness LUD area. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the existing LUD II portion of the roadless area, including the scenic, old growth, and karst values, would continue to be provided long-term protection if designated wilderness.

Under Alternatives 5 and 7, 18,306 acres entailing the Salmon Bay watershed would be converted to Recommended Wilderness LUD, affecting current allocations of LUD II, Semi-remote Recreation, Old-growth Habitat, Scenic Viewshed, Timber Production and Modified Landscape LUDs. Ongoing recreation, special use, and minerals programs could be restricted in the Recommended Wilderness LUD area. No timber harvest would be allowed. Lands suitable for timber production would be reduced to 980 acres. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the Salmon Bay watershed portion of the roadless area, including the scenic, old growth, and karst values, would be provided long-term protection if designated wilderness.

Under Alternative 6, a 16,335-acre portion of the area would be converted to Recommended LUD II. This would eventually convert all lands not currently designated as LUD II to LUD II. Ongoing recreation, special use, and minerals programs would continue similar to current conditions with little restriction. No timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the scenic, old growth, and karst values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. Ongoing recreation, special use, and minerals programs could be restricted in the Recommended Wilderness LUD area. No timber harvest would be allowed. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural

settings of the roadless area, including the scenic, old growth, and karst values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 518 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness		11,076			18,306		18,306	27,412
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	3,783	3,783	3,783	3,783	870		870	
Semi-remote Recreation	187	187	187	187	179		179	
Recommended LUD II						16,335		
LUD II	11,076		11,076	11,076		11,076		
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	1,854	1,854	1,854	1,854	621		621	
Modified Landscape	6,966	6,966	6,966	6,966	4,278		4,278	
Timber production	3,546	3,546	3,546	3,546	3,158		3,158	
TOTAL	**27,412**	**27,412**	**27,412**	**27,412**	**27,412**	**27,412**	**27,412**	**27,412**
Suitable Timber Lands	1,682	1,682	1,682	1,682	980	0	980	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: McKenzie (519)

ACRES (NFS): 80,650

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Kupreanof Lowlands, Prince of Wales Mountains

2003 WILDERNESS ATTRIBUTE RATING: 22 (24)

I. Overview and Description

(1) Location and Access: The McKenzie Roadless Area is located on the east-central part of Prince of Wales Island, approximately 25 air miles west of Ketchikan. It is mostly bounded on the east by Clarence Strait, on the north by Skowl Arm and Kasaan Bay, on the west by roaded areas, and on the south by Cholmondeley Sound. An area on the southeast side of Cholmondeley Sound, around Chasina Point, is also included. Access is by the Alaska Marine Highway System through Hollis (which lies approximately 8 miles to the northwest), by the extensive road system on the west side of the roadless area, and by boat or floatplane from Kasaan Bay, Skowl Arm, or Cholmondeley Sound. There are no places suitable for landing wheeled aircraft. Access to upland areas is by foot or helicopter.

(2) History: The Polk Inlet and Twelvemile Arm areas were important locales of traditional use by the Haida Alaska Native people and before them, by prehistoric cultures. The Kaigani Haida are recognized as having the rights to much of the lower half of Prince of Wales Island at historic contact (USDA Forest Service, 1995). The two remaining Haida villages are located just outside the roadless area at Hydaburg and Kasaan. Paul Bight, at the mouth of McKenzie Inlet on Old Tom Creek, was the location of a reported Haida village (USDA Forest Service, 1995). All of McKenzie Inlet was used for trapping and berry picking. All of Cholmondeley Sound was reported to have been used for fishing, trapping, and hunting (USDA Forest Service, 1995). The Haida Native Corporation made large land entitlement selections along the southwestern boundary of the roadless area along Cholmondeley Sound and Sulzer Portage. The Kavilco Village Corporation owns land along the northern border of the area. The east coastal portion of the McKenzie Roadless Area has a rich chronology of prehistoric and historic use by humans.

The McKenzie area and Kasaan Bay have historically been the entry to Prince of Wales Island. The community of Hollis lies approximately 8 miles northwest of the roadless area. Hollis began as a mining community, but it soon became the boat entry terminal through Kasaan Bay. Currently, Hollis is the only ferry stop on Prince of Wales Island. Mining, trading/supply, boat repair, and, more recently, timber and tourism have been the influences on the McKenzie area. A number of cultural resource sites were identified in the area during literature reviews and surveys for the Polk Inlet, Chasina, and Chomondeley projects (USDA Forest Service, 1995; 1998; 2000).

(3) Geography and Topography: The area is characterized by moderate to rugged topography. Most of this roadless area consists of rolling terrain; however, there are a few high ridges with elevations to above 3,000 feet. Streams in the area are generally short; however, Sunny Creek is about 5 miles in length and the Clover Creek and Lake System is about 6 miles in length. Old Tom Creek is about 3 miles long. Alpine acres total 633 and 4,623 acres are rock. Freshwater lakes are abundant in the eastern lobe of the area; they cover approximately 1,434 acres. The area is almost completely surrounded by saltwater and there are 141 miles of saltwater shoreline. The area includes 290 islands and islets (12 of these are greater than 10 acres) totaling 5,622 acres.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the North Central Prince of Wales Island Biogeographic Province. This province is characterized by relatively gentle

topography; limestone soils are fairly common, and precipitation is relatively low due to interception by lands to the south and southwest. Karst topography and caves are often present.

Ecological Section/Subsection. The McKenzie Roadless Area is contained within the Kupreanof Lowlands Ecological Section (M247G) and the Prince of Wales Mountains Ecological Section (M247I). These areas are represented by three ecological subsections (see table below). The Skowl Arm Till Lowlands Ecological Subsection (68% of roadless area) is characterized by rolling hills with large expanses of exposed granitic bedrock in the southern half and glacial till deposits underlain by sedimentary and volcanic bedrock in the northern half. The poorly drained soils support vast forested and non-forested wetland complexes that comprise more than half the landcover. The well-drained soils of the hillslopes support hemlock and spruce-hemlock forests. Terrain in the Hetta Inlet Metasediments Ecological Subsection (25% of roadless area) rises from deep fjords to sedimentary and volcanic peaks over 3,000 feet in elevation. Soils in the lowlands, lying over poorly drained glacial till, support wetlands. Productive forests are rare in the Hetta Inlet Metasediments Ecological Subsection. The Central Prince of Wales Volcanics Ecological Subsection (7% of roadless area) is mostly comprised of volcanic bedrock. The well drained till soils of the lower elevations support moderate to highly productive hemlock and hemlock-spruce forests which comprise more than half the landcover (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kupreanof Lowlands	Skowl Arm Till Lowlands	68%
Prince of Wales Mountains	Hetta Inlet Metasediments	25%
	Central Prince of Wales Volcanics	7%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock and are typically about 40 inches deep.

(c) Vegetation: This area is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with large components of cedar. Approximately 143 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 71,361 acres mapped as forestland, of which 30,391 acres or 43 percent are mapped as productive old-growth forest. Of the productive old growth, 12,674 acres or 42 percent are mapped as high-volume old-growth forest. The productive old growth includes about 6,549 acres of high-volume, coarse-canopy old growth. There are also 500 acres of second growth resulting from older beach logging and recent helicopter harvest along McKenzie Inlet.

(d) Fish Resources: The Anadromous Waters Catalogue (ADF&G, 2000) identified numerous fish bearing streams in this area, including upper Dog Salmon Creek, Sunny Creek, Clover Creek, Monie Lake and Streams, Spiral Creek, Omar Creek, and Old Tom Creek. These waters support runs of coho, pink, chum, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char. Chinook salmon are present in marine waters adjacent to the area, but do not spawn in the streams (USDA Forest Service, 2000). Lake stocking was likely conducted in the Old Tom drainage and Clover lake area.

(e) Wildlife Resources: This area has high populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, and common waterfowl. Brown bear, moose, and mountain goats are not known to inhabit this area. The area north of Monie Lake and south of Trollers Cove is an important wildlife travel corridor (USDA Forest Service, 2000).

(5) Management Direction and Current Uses: This roadless area was allocated to five different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These LUDs are Timber Production, Modified Landscape, Old-growth Habitat, Research Natural Area, and Semi-remote Recreation.

LUD	Acres
Timber Production	36,005
Modified Landscape	8,679
Old-growth Habitat	31,008
Research Natural Area	4,346
Semi-remote Recreation	611

Approximately 55 percent of this area was allocated to development LUDs (Timber Production and Modified Landscape). The Timber Production LUD was assigned to approximately 45 percent of the roadless area. Land allocated to the Modified Landscape LUD are along the West Arm of Cholmondeley Sound and around Sunny Creek, and make up approximately 11 percent of the roadless area.

The McKenzie Roadless Area contains three non-development LUDs (Old-growth Habitat, Research Natural Area, and Semi-remote Recreation), which account for approximately 45 percent of the roadless area. Approximately 38 percent of the roadless area was allocated to the Old-Growth-Habitat LUD and is a part of the Forest-wide wildlife conservation strategy. Land around Old Tom Creek was allocated to the Research Natural Area LUD and totals approximately 5 percent of the roadless area. Old Tom Creek Research Natural Area was established in 1951 as an example of cedar-hemlock old-growth forest. The islands in saltwater surrounding the roadless area were allocated to the Semi-remote Recreation LUD and account for approximately 1 percent of the roadless area.

The McKenzie Inlet area is the site of recent active timber sales associated with the Polk Inlet Project (USDA Forest Service, 1995). This project resulted in recent harvest and road construction in the Polk Inlet and McKenzie Inlet portions of the area. Plans are being prepared for new timber sales that could extend into the McKenzie Roadless Area from existing roaded and harvested areas. The Chasina Project (USDA Forest Service, 1998) is located on the southeast side of Cholmondeley Sound near Chasina Point. A Draft EIS has been published for new sales north of Cholmondeley Sound, which is referred to as the Cholmondeley Timber Sales EIS (USDA Forest Service, 2000).

Dispersed recreation is also an important use in this area. Because of fishing opportunities and proximity of the area to Ketchikan, the saltwater inlets and bays receive many visitors. Saltery Cove, along the north edge of the roadless area, includes private lands that have eight year-round residents, seasonal residents, and the Sportsman Cove Lodge. Swan Lake, which is located south and east of the lodge, is used by lodge clients and residents for recreation. One public recreation use cabin operated by the Forest Service is located at Trollers Cove on the northeast side of the area; the cove also has a mooring buoy. A permitted floating fishing lodge is moored seasonally in Clover Bay on the east side of the roadless area. A small tract of private land, containing six homes used by seasonal and year-round residents, is adjacent to the southern boundary of the roadless area on Sunny Cove. Some of the residents operate a mariculture facility in the southwest portion of the cove. Fish habitat improvement is an ongoing activity; however, the only fish ladder currently in this area is on Sunny Creek.

(6) Appearance (Apparent Naturalness): Although land within the roadless area generally appears natural, the overall natural appearance of the western portion of the area is affected by the irregular boundary pattern caused by past and recent developments for timber management. This primarily affects the peninsula between Polk and McKenzie Inlets, the small peninsula on Chasina Point, and the small southwestern lobe of the area which lies just north of Sulzer Portage. The eastern half of the area north of Cholmondeley Sound is largely unaffected by developments.

(7) Surroundings (External Influences): The area is bounded by saltwater along the majority of its east, south, and north sides. The western and southwestern boundaries are defined largely by developed areas. Timber management is active on both National Forest System and Native Corporation lands to the west and southwest of the area. Saltwater shorelines of this area receive higher use by people than most other unroaded places on Prince of Wales Island because of their proximity to Hollis, the Prince of Wales Island road system, and the proximity of the area to Ketchikan. Active fishing and recreation lodges are located in Saltery Cove on the north and Clover Bay on the east. Year-round and seasonal residents live at Saltery Cove and at Sunny Cove, on the south.

(8) Attractions and Features of Special Interest: The natural features of the McKenzie Roadless Area, the scenery, the saltwater bays and inlets, and the opportunity to see wildlife are all attractions. The saltwater salmon

fishing adjacent to the area is a major attraction to people in the vicinity of this roadless area. The lodges at Saltery Cove and Clover Bay, on the edges of the area, attract many clients during the summer. The area contains 25 inventoried recreation places, which cover 59,628 acres, or 74 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The McKenzie Roadless Area was part of two areas from the 1989 roadless area map. Most of the area was originally part of the much larger Polk Roadless Area identified in 1989. Because of ongoing developments in the area since then, the Polk Roadless Area was divided into three separate areas: Kasaan Bay, McKenzie, and Twelvemile Roadless Areas. The McKenzie Roadless Area is the largest of the three; however, recent developments (particularly in the Rock Creek, Polk Creek, Omar Creek, and Polk Inlet areas) have reduced the size of this portion of the area relative to its size in the original Polk Roadless Area. Several smaller areas near the developed boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the roadless area as wilderness.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The land within the roadless area remains in a natural condition. However, the overall natural appearance of the western portion of the area is affected by the irregular pattern of intrusion caused by past and recent road construction and harvest activity. This primarily affects the peninsula between Polk and McKenzie Inlets, the small area south of Cholmondeley Sound, and the small southwestern lobe of the area which lies just north of Sulzer Portage. The eastern half of the area north of Cholmondeley Sound is largely unaffected by developments; however, a lodge and small community are located at Saltery Cove on the north, an active fishing lodge is located in Clover Bay on the east, and a small community is located adjacent to the southern border at Sunny Cove. Mining developments originating from the Khayyam Mine extend from saltwater to the ridge top at the head of McKenzie Inlet. The overall area has high natural integrity and apparent naturalness because it is large enough to absorb effects of most nearby developments and activities. The eastern part of the peninsula has very high natural integrity and apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The opportunity for solitude and primitive recreation within this roadless area is very high throughout the area. In the western half, because of the sights and sounds of nearby intermittent management activities, the sounds of boat use in the bays, and the good chance of encountering other people along the streams, the opportunity is somewhat reduced, but the relatively large size of the area allows these effects to be absorbed.

The opportunities for primitive recreation are related to the many saltwater and upland recreation sites and the diverse terrain that breaks up the area into many isolated bays and upland lake basins. The eastern half of this area is especially suitable for primitive recreation opportunities. However, many of the larger bays (i.e., Saltery Cove, Clover Bay, and Sunny Cove) contain developments with seasonal or year-round residents. The topography of the area makes travel challenging, the presence of black bears presents a degree of challenge, and the remoteness of inland portions of the area presents a need for woods skills and experience.

The area provides primarily primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	57,934	72%
Semi-Primitive Non-Motorized (SPNM)	15,546	19%
Semi-Primitive Motorized (SPM)	127	0%
Roaded Modified (RM)	6,493	8%
Rural (R)	469	1%

The area contains 25 inventoried recreation places, which cover 59,628 acres, or 74 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	12	43,839
SPNM	7	10,476
SPM	1	127
RM	8	4,717
R	2	469

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

Because of excellent fishing and proximity of the area to Ketchikan, the saltwater inlets and bays receive many visitors. One public recreation use cabin and a saltwater mooring buoy are located at Trollers Cove, a lodge is located on private land at Saltery Cove, and a permitted floating fishing lodge is located in Clover Bay.

The Sportsman Cove Lodge is located on private land along the north edge of the roadless area, near Saltery Cove. Swan Lake, located south and east of the lodge, is used by lodge clients and residents for recreation. Some residents adjacent to the southern boundary of the roadless area on Sunny Cove operate a mariculture facility in the southwest portion of the cove.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Polk Roadless Area was 18 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the McKenzie Roadless Area (which is a subset of the original Polk Roadless Area) was given a rating of 22. The difference in ratings is due to dividing the Polk Roadless Area into three roadless areas, of which McKenzie is one. Because the eastern half of the McKenzie area, north of Cholmondeley Sound, could be separated from the remaining more highly affected area, a separate WARS score was calculated. The WARS rating for the eastern half would increase to 24.

(4) Ecologic and Geologic Values: The McKenzie Roadless Area is not directly connected to any other roadless areas on Prince of Wales Island; it is separated from them by roaded areas or saltwater inlets and sounds. The area contains patchy areas of productive old-growth forest; these areas are fragmented by muskeg, fens, scrub-shrub wetlands, forested wetlands, alpine shrublands, and lakes and ponds. The largest blocks of old growth are in the Goose Bay, Old Tom Creek, Sunny Cove, Monie Lake, and Saltery Cove watersheds and along McKenzie Inlet and the West Arm of Cholmondeley Sound.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 674, 675, and 679, all along Cholmondeley Sound, as primary salmon producers. The rest of this roadless area is listed as a secondary salmon producer and no VCUs are listed as primary sport fish producers.

The Anadromous Waters Catalogue (ADF&G, 2000) identified numerous fish-bearing streams in this area, including upper Dog Salmon Creek, Sunny Creek, Clover Creek, Monie Lake and Streams, Spiral Creek, Omar Creek, and Old Tom Creek. These waters support runs of coho, pink, chum, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char. Chinook salmon are present in marine waters adjacent to the area, but do not spawn in the streams (USDA Forest Service, 2000). Sunny Creek, which provides habitat for coho, pink, and sockeye salmon as well as steelhead trout, has the highest escapement

of pink and chum salmon within the area, receiving an estimated peak escapement of 49,200 pink salmon annually (USDA Forest Service, 2000). Monie Lake and Old Tom Creek have the highest fish species diversity in this area, with habitat for sockeye, coho, pink, and chum salmon, as well as Dolly Varden char. Monie lake provides habitat for cutthroat trout as well, while Old Tom Creek has a run of steelhead (ADF&G, 2000).

A fishpass was completed on Sunny Creek in 1984 to increase habitat for pink salmon (USDA Forest Service, 2000). Another fishpass adjacent to this area was completed on Dog Salmon Creek in 1989.

(b) Wildlife Resources: This area has high populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, and common waterfowl. Based on harvest data compiled from 1985 to 1994, VCU 619, which covers the northwestern portion of the area along Polk Inlet, was identified among the top 25 percent of black bear harvest areas on the Tongass (ADF&G, 1998). The largest patches of marten habitat occur in the largest old-growth blocks (see above under II-4). Sensitive species that potentially occur here include Peale's peregrine falcon, Queen Charlotte goshawk, and trumpeter swans, which have been reported in the Saltery Cove area. Brown bear, moose, and mountain goats are not known to inhabit this area (MacDonald and Cook, 1999).

The area north of Monie Lake and south of Trollers Cove is an important wildlife corridor (USDA Forest Service, 2000). The Rock Creek and Omar Creek Corridors are considered important wildlife corridors connecting the area along Cholmondeley Sound with the areas along Polk Inlet and McKenzie Inlet, respectively, and Old Tom/McKenzie/Goose Bay and Sunny Creek/North Shore Cholmondeley Sound are considered important as old-growth blocks and corridors (USDA Forest Service, 1996).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Craig Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There is a small area of low to mid- vulnerability karst in the southern portion of this roadless area along the West Arm of Cholmondeley Sound west of Sunny Cove. The mapped karst resources represent 131 acres of medium to low vulnerability karst or less than 1 percent of the roadless area. There are no glaciers or unique geologic features known in this area.

(5) Scientific and Educational Values: The Old Tom Creek Research Natural Area, covering approximately 4,346 acres, was established in 1951 as an example of cedar-hemlock old-growth forest. It also includes some examples of riparian spruce forest, extensive tidal meadows, and dense bald eagle and black bear populations.

(6) Scenic Values: The area is part of the Coastal Hills Character Type and is characterized by moderately steep landforms, predominantly rounded summits, elevations above 3,000 feet, and flat-floored U-shaped valleys. This area exhibits a wide variety of landscape features present in this character type including prominent peaks, rolling terrain diverse lake basins, and rugged shorelines. Most of this area is seen as a natural landscape, especially when viewing from the mouth of Skowl Arm, Kasaan Bay, Clarence Strait, and Cholmondeley Sound. Surrounding timber harvest activities might be seen from Polk Inlet and McKenzie Inlet, and small groups of residences or lodges can be seen in Saltery Cove, Clover Bay, and Sunny Cove. The extensive developments on private lands to the north and south have a significant effect on the scenic values.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include saltwater use areas in West Arm Cholmondeley Sound, Sunny Cove, and about 1 mile west of Skowl Arm to the entrance of Cholmondeley; the Sunny Cove and Saltery Cove communities; the Trollers Cove public recreation cabin; and Goose Bay and Clover Bay boat anchorages.

Most of this area, about 70 percent, was rated as Variety Class B and possesses landscape diversity common for the character type. About 29 percent of the area were inventoried as Variety Class A, indicating a landscape diversity unique for the character type. The Variety Class A landscapes include the head of Polk Inlet from the estuary up to the Barren Mountain-Rock Butte Ridge (although much of this area is now outside the roadless area) and the landscapes along the east side of the area between Cholmondeley Sound and Skowl Arm. The Polk Inlet area is unique in that it exhibits low elevations, but very rugged and diverse terrain, including a variety of different lake basins surrounded by steep slopes and rock cliffs. The shoreline of Skowl Arm and Cholmondeley Sound is very irregular and possesses many scenic coves.

Most of this area, approximately 89 percent, was inventoried in the Type I Existing Visual Condition, where the natural landscape has remained unaltered by human activity. The remaining 10 percent of land in this area is in a moderately to heavily altered visual condition, Type III, IV, or V, due to past timber harvest.

(7) Social, Cultural, and Historical Values: The Polk Inlet and Twelvemile Arm areas were important locales of traditional use by the Haida Alaska Native people and before them, by prehistoric cultures. The Kaigani Haida are recognized as having the rights to much of the lower half of Prince of Wales Island at historic contact (USDA Forest Service, 1995). The two remaining Haida villages are located just outside the roadless area at Hydaburg and Kasaan. Paul Bight, at the mouth of McKenzie Inlet on Old Tom Creek, was the location of a reported Haida village (USDA Forest Service, 1995). The east coastal portion of the McKenzie Roadless Area has a rich chronology of prehistoric and historic use by humans.

The McKenzie area has historically been the entry to Prince of Wales Island. The community of Hollis lies approximately 8 miles northwest of the roadless area. Hollis began as a mining community, but it soon became the boat entry terminal through Kasaan Bay. Currently, Hollis is the only Alaska Marine Highway stop on Prince of Wales Island. Mining, trading/supply, boat repair, and, more recently, timber and tourism, have been the influences on the McKenzie area. Saltwater shorelines of this area currently receive higher use by people than most other unroaded places on Prince of Wales Island because of their proximity to Hollis and the Prince of Wales Island road system. Because of excellent fishing and proximity of the area to Ketchikan, the saltwater inlets and bays receive many visitors. Active fishing and recreation lodges are located in Saltery Cove on the north and Clover Bay on the east. Year-round and seasonal residents live at Saltery Cove and at Sunny Cove, on the south.

Available information indicates that substantial subsistence activities occur in the area, especially along the extensive saltwater shorelines of the area. The area is important to residents of Saltery Cove and Sunny Cove, as well as other Prince of Wales Island communities, including Hollis and Kasaan. VCUs 674, 675, and 679, all along Cholmondeley Sound, were listed among the VCUs with the highest community fish and wildlife values by ADF&G (1998). VCUs 618 and 620, along Skowl Arm, were listed in the second and third most important groups of VCUs. VCUs 618, 619, and 620, along Skowl Arm, were listed among those VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The boundaries of the area are mostly natural, consisting of saltwater inlets, bays, and straits. However, the western boundary consists of developed areas, many of which penetrate the roadless area; the southern boundaries of the Chasina Point portion of the area also consist of developed areas. Because of fragmentation, the proximity of active timber management, and the presence of the Old Tom Creek Research Natural Area (which would not be consistent with wilderness designation), the western portion of the area could be difficult to manage as wilderness. The portion of the area east of McKenzie Inlet and east of and including the Sunny Cove watershed (north of Cholmondeley Sound), would be very manageable as wilderness, although the fishing lodge permit at Clover Bay and the lodge and communities at Saltery and Sunny Coves could affect the wilderness qualities of the eastern half of the area.

III. Availability for Management as Wilderness

(1) Recreation, including Tourism Potential: There is great opportunity to manage this area for developed and dispersed recreation in a semi-primitive to primitive setting. There are opportunity and an identified need for trails in the west half of this area. The potential is very good for land or water-based fishing resorts. There is also good potential for trail development from the many protected coves along the east side.

The proximity of this area to Hollis, the Prince of Wales Island road system, and Ketchikan and the variety of recreation opportunities offered by the area have caused recreation management to be highlighted in the long-term planning for management of this area. There is considerable private sector interest in developing commercial fishing resorts on the saltwater fringe, as has been exhibited by lodges at Saltery Cove and Clover Bay.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation or management in an unroaded condition.

(3) Fish Resources: A fishpass was completed on Sunny Creek in 1984 to increase habitat for pink salmon (USDA Forest Service, 2000). Another fishpass adjacent to this area was completed on Dog Salmon Creek in 1989. A recently completed fish habitat inventory indicates that there is excellent potential for salmon enhancement projects, such as constructing fish passes, on several of the streams within the area.

(4) Wildlife Resources: There are no long-range plans for wildlife habitat improvement projects.

(5) Timber Resources: There are 30,391 acres mapped as productive old growth in the roadless area. In addition, 500 acres mapped as second-growth forest have resulted from beach and helicopter logging. Of these acres, 19,172 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 4,849 acres, or 6 percent, of this roadless area are estimated to be suitable for timber production. Approximately 1,469 of the suitable acres are mapped as high-volume old growth; of these acres, 559 are mapped as high-volume, coarse-canopy old growth.

Timber harvest has been occurring along much of the perimeter of the roadless area for many years causing it to shrink in size. The Polk Inlet Project (USDA Forest Service, 1995) has recently been implemented in the Polk Inlet and McKenzie Inlet portions of the roadless area. Good potential exists to manage much of the west half of the area for its timber potential. Two timber sale projects are planned for the eastern portion of the area: the Cholmondeley Project (USDA Forest Service, 2000) to the north of Cholmondeley Sound and the Chasina Project (USDA Forest Service, 1998) to the south. The Chasina project is being implemented, and the Cholmondeley EIS is expected to be finalized in 2003. It proposes developments in the vicinity of Sunny Cove, Saltery Cove, and Clover Bay.

(6) Fire, Insects, and Disease: The area has no significant fire history, insects, and disease. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: Mineral development potential is very low. There are 11 mining claims registered with the Bureau of Land Management near Cholmondeley Sound; however, there are no patented claims in the area (USDA Forest Service, 2000). McKenzie was the site of considerable mineral development around 1900. The community of Kiam existed at the head of McKenzie Inlet, which serviced a mining operation at the top of the ridge (the mine portal is actually inside the roadless area); there was even a post office. A tramway, complete with rail and telegraph lines, is visible along the east side of Omar creek. Ore cars are still present along the tramway, and a steam donkey resides at the end of the tram. The majority of this development is not in the roadless areas as mapped but does continue up the mountain and into the area somewhat. Old partial-cut timber harvest activities all along the beach on the west side of the inlet, within the roadless area, are very obvious to those on the ground. Many large stumps are present, and some trees were felled and bucked, but were unyarded.

This area contains 19,816 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). In addition, this area contains an estimated 80,650 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 2,655 of these acres are considered to have moderate to high potential for development.

(8) Transportation and Utilities: No transportation or utility corridors are planned for this area other than for the harvest of local timber.

(9) Water Availability and Use: The area's water demand comes from the public recreation cabin at Trollers Cove, in addition to the small communities at Saltery and Sunny Coves and the fishing lodge at Clover Bay. These

areas have relatively small water systems with minimal effect on the roadless area. There are no other existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: Old Tom Creek Research Natural Area, covering approximately 4,500 acres, is in this roadless area. Historic uses and timber harvest activities in McKenzie are of interest. Management as wilderness may restrict the research activities. The mapped karst resources encompass approximately 131 acres or less than one percent of the roadless area.

(11) Land Use Authorizations: There is a permitted floating fishing lodge in Clover Bay.

(12) Land Status: Approximately 174 acres, primarily located along the perimeter of the area, are non-National Forest System lands. This roadless area contains three areas of encumbered lands. These encumbered lands are adjacent to private land owned by the Sealaska Corporation and the Kootznoowoo Village Corporation. Private and State land conveyances have influenced the boundary of this roadless area.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives local use for subsistence and recreation activity. Significant concern has been expressed by residents and users of Sunny Cove, Saltery Cove, and Clover Bay regarding the potential effects the timber sales proposed in the Cholmondeley EIS could have on their water systems, scenic related values, and tourism-related income.

(b) Congressional Interest: Two bills from the U.S. House of Representatives included wilderness proposals for Southeast Alaska. In 1989, HR 987 did not include this area. In 2001, HR 2908 did not propose the area for wilderness, but did propose it to be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: No specific recommendations for wilderness were made. Some comments wanted McKenzie Inlet to be left alone since Polk Inlet had been heavily logged. Some comments wanted Cholmondeley Sound to be managed for recreation. Other commenters wanted no timber harvest in VCUs 618-620. Others wanted the roadless area to be in timber production.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: Some comments on the Polk Inlet Project desired no new roads in the project area, including the roadless area. Others supported continued timber harvest and road development. Some comments relative to the Cholmondeley Project opposed roads and logging because of the effects they would have on domestic water sources, subsistence, wildlife, tourism, and other resources; most residents of Saltery and Sunny Cove and the floating lodge at Clover Bay opposed roads and timber harvest in this area because of the potential effects on them.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as having important fish and wildlife habitat and populations; although not a top priority for protection, it ranked in their top third among all roadless areas.

The Alaska Department of Fish and Game rated the McKenzie roadless area (VCUs 615, 616, 617, 675, and 676) as the fifth highest priority for protection on Prince of Wales Island and Adjacent Islands. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

SEACC recommended this area be designated as LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 519 for permanent protection as LUD II. Audubon Alaska recommended that Cholmondeley should be protected from logging and road building.

The owners of the Clover Bay Lodge recommended that the Cholmondeley area be designated as LUD II. The communities of Saltery Cove, Sunny Cove, West Arm Cannery, and Sportsman's Cove Lodge and Clover Bay Lodge passed a joint resolution calling for LUD II designation of VCU 519 and supporting Alternative 6 in general. A number of other individual commenters identified the Cholmondeley area as an area in need of protection.

(2) Nearby Roadless and Wilderness Areas and Uses: The McKenzie Roadless Area is not directly connected to any other unroaded areas. It is located across Cholmondeley Sound from parts of the Eudora Roadless Area (507). It is separated from the nearby Kasaan Bay (536) and Twelvemile (534) Roadless Areas by developed areas. The Karta Wilderness is 10 miles to the northwest, and the South Prince of Wales Wilderness is 10 miles to the south.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	215	235
Ketchikan (Pop.14,070)	25	25
Wrangell (Pop. 2,308)	75	90
Petersberg (Pop. 3,324)	100	115

Hollis, located on Prince of Wales Island, is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The McKenzie Roadless Area is located on the east-central part of Prince of Wales Island. It is mostly bounded on the east by Clarence Strait, on the north by Skowl Arm and Kasaan Bay, on the west by roaded areas, and on the south by Cholmondeley Sound. An area on the southeast side of Cholmondeley Sound, around Chasina Point, is also included. The McKenzie Roadless Area is characterized by moderate to rugged topography. Most of this roadless area consists of rolling terrain; however, there are a few high ridges with elevations to above 3,000 feet. The area is almost completely surrounded by saltwater including several large bays and inlets.

The majority of the McKenzie Roadless Area is unmodified and in a natural condition. However, the western portion and the Chasina Point portion are heavily influenced by nearby developments. The area has high natural integrity and apparent naturalness. The eastern portion has very high natural integrity and apparent naturalness. The opportunity for solitude and primitive recreation is very high in the area.

The area has moderate to high scenic quality; approximately 29 percent of the landscape was considered distinctive from a scenery standpoint. The Old Tom Creek Research Natural Area is part of the roadless area. There is some karst development in the area. Small communities and/or commercial lodges are located in Saltery Cove near the north boundary, Clover Bay on the east boundary, and Sunny Cove on the south boundary.

The roadless area includes about 12,674 acres of high-volume, old-growth forest. Of these acres, approximately 6,549 are mapped as high-volume, coarse-canopy old growth.

The McKenzie Roadless Area is classified as being primarily in the North Central Prince of Wales Island Biogeographic Province and makes up about 5 percent of the province. It is one of 15 inventoried roadless areas found within the province, which make up about 44 percent of the province. The Karta River Wilderness makes up about 3 percent of the province, and three designated LUD II areas (Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and Salmon Bay) make up about 5 percent of the province.

The McKenzie Roadless Area lies within two ecological sections; it represents 5 percent of the Kupreanof Lowlands Ecological Section and 3 percent of the Prince of Wales Mountains Ecological Section. Both of these ecological sections contain relatively small areas in existing wilderness (1 and 8 percent, respectively) and existing LUD II (1 and 3 percent, respectively), but are well represented by other existing non-development LUDs (33 and 22 percent, respectively).

The majority (68 percent) of the roadless area is in the Skowl Arm Till Lowlands Ecological Subsection; this portion of the roadless area represents 62 percent of the entire ecological subsection, none of which is in existing wilderness or LUD II, but 29 percent is protected by other existing non-development LUDs. One-quarter (25 percent) of the roadless area lies in the Hetta Inlet Metasediments Ecological Subsection; this portion of the roadless area represents 9 percent of the entire ecological subsection, 2 percent of which is in existing wilderness, 9 percent in existing LUD II, and 14 percent is protected by other existing non-development LUDs. The remaining 7 percent of the roadless area is in the Central Prince of Wales Volcanics Ecological Subsection; this portion of the roadless area represents 1 percent of the entire ecological subsection. Approximately 8 percent of this ecological subsection is located in existing wilderness and another 23 percent is protected by other existing non-development LUDs.

The McKenzie Roadless Area was rated 22 out of a possible 28 points under WARS. As such, its WARS rating is ranked 38th from the highest (along with 8 other roadless areas) among the 109 Tongass inventoried roadless areas. Another rating was done for the eastern portion of the area, which resulted in a score of 24.

There is both local and national support for managing the roadless area in an unroaded condition and some support for congressional designation as wilderness. Designation would create a wilderness heavily influenced on the western portion and on Chasina Point, and would include the Old Tom Research Natural Area on the western portion, and would provide for non-development in the vicinity of Saltery Cove, Clover Bay, and Sunny Cove. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Designation of the area also would add Congressional protection to about 62 percent of the Skowl Arm Till Lowlands Ecological Subsection, none of which is in existing wilderness or LUD II. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate for the entire area and relatively high for the eastern portion.

V. Environmental Consequences

The McKenzie Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 45 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 55 percent of the roadless area. The land in the development LUDs includes an estimated 4,849 acres that are suitable for timber production (8 percent of the suitable acres on the Craig Ranger District). Approximately 559 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 19,816 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains an estimated 80,650 acres of undiscovered locatable mineral resources; 2,655 of these acres are considered to have moderate to high potential for development. The recreation, minerals, research, and special use programs would continue. Timber harvest planning in the area would continue. The adjacent communities and/or lodges could be affected by future timber harvest activities and development. The values associated with the natural settings of the area could be affected by ongoing activities allowed by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. The ongoing recreational use, special uses, research, and minerals programs could continue similar to current conditions. No timber harvest would be allowed. The adjacent communities and/or lodges would not be affected. The values associated with the natural settings of the roadless area, including the scenic, old growth, commercial recreation, and karst values, would be provided long-term protection if designated LUD II. Designation of the area also would add Congressional protection to about 62 percent of the Skowl Arm Till Lowlands Ecological Subsection, none of which is in existing wilderness or LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. No timber harvest would be allowed. The ongoing recreational use, special uses, and mineral management could be restricted. Current operations by the adjacent communities and/or lodges would not likely be affected unless they desired

expanded recreation development or uses within the area. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic, old growth, commercial recreation, and karst values, would be provided long-term protection if designated wilderness Designation of the area also would add Congressional protection to about 62 percent of the Skowl Arm Till Lowlands Ecological Subsection, none of which is in existing wilderness or LUD II.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 519 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								80,650
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area	4,346	4,346	4,346	4,346	4,346		4,346	
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	31,008	31,008	31,008	31,008	31,008		31,008	
Semi-remote Recreation	611	611	611	611	611		611	
Recommended LUD II						80,650		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	8,679	8,679	8,679	8,679	8,679		8,679	
Timber production	36,005	36,005	36,005	36,005	36,005		36,005	
TOTAL	**80,650**	**80,650**	**80,650**	**80,650**	**80,650**	**80,650**	**80,650**	**80,650**
Suitable Timber Lands	4,849	4,849	4,849	4,849	4,849	0	4,849	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Kasaan (520)

ACRES (NFS): 7,605

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Kupreanof Lowlands

2003 WILDERNESS ATTRIBUTE RATING: 18

I. Overview and Description

(1) Location and Access: This roadless area is located on the southern tip of Kasaan Peninsula on Prince of Wales Island. The area is bordered to the south and west by non-National Forest System lands. Clarence Strait borders the area to the north and east. Kasaan Bay borders the area to the southwest.

Access is by boat or floatplane. Ketchikan, located approximately 25 air miles southeast of the area, is the closest large community. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: Goldschmidt and Haas (1946) indicated that this area was historically Kasaan territory. They identified a number of uses in the immediate vicinity of the area including hunting/trapping and fishing for shellfish, as well as a number of commercial fish traps located along the northeast shore of the roadless area.

(3) Geography and Topography: This roadless area is characterized by rugged mountains and coastline. The area consists of a long, rounded ridge with very steep slopes close to 2,000 feet in elevation. The area includes 15 miles of shoreline on saltwater, 16 acres of rock, and 7 acres of small islands. No alpine features, icefields, or glaciers are mapped in the area.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the North Central Prince of Wales Island Biogeographic Province. This province is characterized by rolling, gentle landforms with localized rugged topography. Limestone is common and overall forest productivity is high. Karst topography and caves are present. Precipitation is relatively low due to interception by lands to the south and southwest.

Ecological Section/Subsection. The Kasaan Roadless Area is contained entirely within the Kupreanof Lowlands Ecological Section (M247G). This area is represented by one ecological subsection (see table below). The Kasaan Peninsula Volcanics Ecological Subsection is a southeast-northwest peninsula that consists of rounded volcanics dissected by small U-shaped valleys. Most of this area has been harvested and over half the area is in early stages of second-growth reforestation. Organic soils upon broad ridgetops support shrub and forested wetlands that comprise one fourth the landcover. Well-drained soils of the mountain toeslopes and valleys support productive hemlock and hemlock-spruce forests. The soils along the coastline are shallow and exposed bedrock is common (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kupreanof Lowlands	Kasaan Peninsula Volcanics	100%

(b) Soils: The highly organic, low clay content soils found in this area are generally formed over bedrock and are typically about 40 inches deep.

(c) Vegetation: The vegetation in this area is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with large components of cedar.

There are approximately 7,545 acres mapped as forest land, of which 3,082 acres (41 percent) are mapped as productive old-growth forest. Of the productive old growth, 1,314 acres (43 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 293 acres of high-volume, coarse-canopy old growth. There is no second growth in this area.

(d) Fish Resources: There are six unnamed fish-bearing streams in this area. These streams provide habitat for coho and pink salmon.

(e) Wildlife Resources: This area has high populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, loon, and common waterfowl. Alpine areas are excellent ptarmigan habitat. Moose inhabit Prince of Wales Island, but brown bear and mountain goat do not (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated three Land Use Designations (LUD) in the 1997 Tongass Land and Resource Management Plan. These three LUDs are Transportation and Utility System (TUS), Old-growth Habitat, and Semi-remote Recreation. The TUS LUD is a secondary LUD that overlays the other land uses.

LUD	Acres
Transportation and Utility System	NA
Old-growth Habitat	7,601
Semi-remote Recreation	3

A part of this roadless area was allocated to a development LUD overlay, Transportation and Utility System. A potential State road corridor running the length of the area to the southern tip of the peninsula was assigned to the Transportation and Utility System LUD overlay. A potential power transmission corridor running along the northeast shore was also assigned to the Transportation and Utility System LUD overlay. No roads or transmission facilities currently exist, but this LUD allows planning for their development in this area.

All of the roadless area was allocated to a non-development LUD (Old-growth Habitat and Semi-remote Recreation). Approximately 100 percent of the roadless area was allocated to the Old-growth Habitat LUD. Less than 1 percent of the roadless area was allocated to the Semi-remote Recreation LUD, located on a couple small islands off the coast.

This roadless area receives little use. The Tongass Fish and Wildlife Resource Assessment (Alaska Department of Fish and Game [ADF&G], 1998) indicated that the VCUs that comprise this area are subsistence use areas with a moderate sensitivity to disturbance.

(6) Appearance (Apparent Naturalness): The Kasaan Roadless Area is unmodified and in a natural condition, and appears that way when viewed from nearby Visual Priority Routes and Use Areas.

(7) Surroundings (External Influences): The area is bordered by Native Corporation and State-owned land to the west and south, respectively. Clarence Strait and Kasaan Bay make up the rest of the roadless area boundary. The adjoining private lands have been developed for timber production. The entire area is in close proximity to, or overlooks, the shipping and marine channels of Clarence Strait and Kasaan Bay. The near constant noise of boats can be heard over most of the area. Low-flying aircraft may frequently be noticed by visitors to the area.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, the opportunity to see wildlife, and the opportunity to study the processes that formed this country may all be

attractions. The area contains one inventoried recreation place, which covers 630 acres (1 percent) of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The 1989 Kasaan Roadless Area included Grindall Point and Grindall Island. These areas have been conveyed to the State and are no longer National Forest System lands or part of the Kasaan Roadless Area.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: This roadless area has high natural integrity and apparent naturalness when viewed from nearby locations and from within the area itself. The area is, however, physically separated from other parts of the National Forest System by the private lands that border the area to the west. Grindall Point and Grindall Island formerly the key features of this area are now owned by the State of Alaska.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The area provides low opportunity for solitude and primitive recreation because the entire area is in close proximity to, or overlooks, the shipping and marine channels of Clarence Strait and Kasaan Bay. The near constant noise of boats can be heard over most of the area. Low-flying aircraft may occasionally be noticed by visitors to the area. Activities on adjacent private lands can distract visitors as well.

The area provides primarily primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	5,765	76%
Semi-Primitive Motorized (SPM)	1,836	24%

The area contains one inventoried recreation place, which covers 630 acres (8 percent) of the roadless area.

ROS Class	# of Rec. Places	Total Acres
P	1	630
SPM	0	0

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

The inventoried roadless areas of the Tongass National Forest were rated according to this system in 1989 for the Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Kasaan Roadless Area was given a rating of 15 out of 28 possible points. The rating was re-evaluated for this updated version of the Analysis of the Management Situation. Based on this re-evaluation, the area was given a rating of 18. This rating reflects the relatively high natural integrity and apparent naturalness of the area.

(4) Ecologic and Geologic Values: The Kasaan Roadless Area is not part of a larger unroaded area. It is physically separated from other National Forest System lands by the private Native Corporation lands that border the area to the west.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not identify these VCUs as primary salmon or sport fish producers.

There are six unnamed fish-bearing streams in this area. These streams provide habitat for coho and pink salmon.

(b) Wildlife Resources: This area has high populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, loon, and common waterfowl. Alpine areas are excellent ptarmigan habitat. Moose inhabit Prince of Wales Island, but brown bear and mountain goat do not (MacDonald and Cook, 1999).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Thorne Bay Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are no glaciers or unique geologic features in the area.

(5) Scientific and Educational Values: There are no known unique scientific or educational values identified in this roadless area.

(6) Scenic Values: The Kasaan Roadless Area is part of the Coastal Hill character type, which is characterized by moderately steep landforms, predominantly rounded summits, elevations up to 4,500 feet, and flat-floored, U-shaped valleys. A variety of island groups are also common. The landscape of the Kasaan Roadless Area is very representative of this character type.

The area displays natural characteristics when viewed from major and minor water travel routes and from inside the area itself. Visual Priority Routes and Use Areas identified by the Forest Plan within or adjacent to the area include Clarence Strait (Alaska Marine Highway) and Grindall Island (State Marine Park).

Almost all of the area, approximately 99 percent, is inventoried as Variety Class B (possessing landscape diversity and features that are common to the character type). The Existing Visual Condition (EVC) for approximately 99 percent of the area is Type I, where the natural landscape has remained unaltered by human activity.

(7) Social, Cultural, and Historical Values: Goldschmidt and Haas (1946) indicated that this area was historically Kasaan territory. They identified a number of uses in the immediate vicinity of the area including hunting/trapping and fishing for shellfish, as well as a number of commercial fish traps located along the northeast shore of the roadless area.

This roadless area receives little use. The Tongass Fish and Wildlife Resource Assessment does not list any of the VCUs in this area among the VCUs with the highest sensitivity to disturbance of subsistence use areas. These VCUs were not listed among the highest community use value areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The boundaries of this area are for the most part easily identified and would not be difficult to manage if the area were designated wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: The recreation potential of this area is very low because access to the area is difficult due to the rugged terrain and limited coastal access. The State land selections, which included Grindall Point and Grindall Island, included all land areas most suitable for some type of recreation purpose.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: No fish habitat enhancement projects are currently planned for this roadless area.

(4) Wildlife Resources: No wildlife habitat enhancement projects are currently planned for this roadless area.

(5) Timber Resources: There are 3,082 acres mapped as productive old growth in the roadless area and no acres mapped as second growth. Of these acres, 2,528 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), no acres of this roadless area is estimated to be suitable for timber production.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: This area contains an estimated 5,748 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have high potential for development. The USGS Mineral Resources Data website indicates that there are two prospects in this area for copper, gold, and silver.

(8) Transportation and Utilities: A potential State road corridor running the length of the area to the southern tip of the peninsula was assigned to the Transportation and Utility System LUD. A potential power transmission corridor running along the northeast shore was also assigned to the Transportation and Utility System LUD. No roads or transmission facilities currently exist, but this LUD allows planning for their development in this area. Until a specific project is initiated, the lands affected by these potential corridors are managed in accordance with the underlying LUD.

(9) Water Availability and Use: There are no developed recreation sites or other facilities located in this roadless area that would create a demand for domestic water use. There are no existing or planned hydroelectric or domestic water projects.

(10) Areas of Scientific Interest: The area has not been identified as a candidate Research Natural Areas or for any other scientific purpose.

(11) Land Use Authorizations: There are no land use authorizations in the area.

(12) Land Status: The area consists entirely of National Forest System lands.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: This roadless area receives little use.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Kasaan Roadless Area. In 2001, HR 2908 proposed that this roadless area be managed as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: This area was not specifically identified in public input during the Forest Plan revision and appeals. The majority of people and organizations commenting on Prince of Wales Island mentioned specific areas other than the Kasaan Roadless Area. In general, some commenters wanted logging to continue on Prince of Wales Island at present levels, while others felt that too much logging had already occurred.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: The Kasaan Roadless Area is not within the project area of any recently completed project-level EISs.

(f) Public Input Expressed During Supplemental EIS Process: In an August 15 Tribal Resolution, the Organized Village of Kasaan requested that "…all customary and traditional use areas within the Tongass National Forest be recommended for long term protection".

SEACC recommended this area for permanent protection through LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 520 for permanent protection as LUD II.

(2) Nearby Roadless and Wilderness Areas and Uses: There are no roadless areas adjacent to the Kasaan Roadless Area. Relatively nearby roadless areas include Kasaan Bay (536) and McKenzie (519) located west and southwest across Kasaan Bay, respectively. The Cleveland Roadless Area (528) is located east across Clarence Strait from the area.

The Karta River Wilderness, located approximately 10 miles west of the area, is the closest wilderness.

(3) Distance From Population Centers (accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	25	25
Wrangell (Pop. 2,308)	65	80
Petersburg (Pop. 3,324)	95	105
Juneau (Pop. 30,711)	210	225

Hollis, located on Prince of Wales Island, currently is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Kasaan Roadless Area is located on the southern tip of Kasaan Peninsula on Prince of Wales Island. The area is bordered to the south and west by non-National Forest System lands. Clarence Strait borders the area to the north and east. Kasaan Bay borders the area to the southwest. The Kasaan Roadless Area is characterized by rugged mountains and coastline. The area consists of a long, rounded ridge with very steep slopes close to 2,000 feet in elevation.

The area is unmodified and in a natural condition. The area has very high natural integrity and apparent naturalness. The opportunity for solitude and primitive recreation is low.

The Kasaan Roadless Area has moderate scenic quality; none of the landscape is classified as distinctive from a scenery standpoint. There are no known features of ecologic, geologic, scientific, or cultural significance in this area.

The roadless area includes about 1,314 acres of high-volume, old-growth forest. Of these acres, approximately 293 are mapped as high-volume, coarse-canopy old growth.

The Kasaan Roadless Area is classified as being in the North Central Prince of Wales Island Biogeographic Province and makes up about 1 percent of the province. It is one of 15 inventoried roadless areas found within the province, which make up about 44 percent of the province. The Karta River Wilderness makes up about 3 percent of the province, and three designated LUD II areas (Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and Salmon Bay) make up about 5 percent of the province.

The Kasaan Roadless Area lies completely within the Kupreanof Lowlands Ecological Section and represents 1 percent of the ecological section. Approximately 1 percent of the Kupreanof Lowlands Ecological Section is in existing wilderness, 1 percent is in existing LUD II, and an additional 33 percent is protected by other existing non-development LUDs.

The entire (100 percent) roadless area is in the Kasaan Peninsula Volcanics Ecological Subsection; this portion of the roadless area represents 21 percent of the ecological subsection. None of this ecological subsection is in existing wilderness or LUD II, but 21 percent is protected by other existing non-development LUDs.

The Kasaan Roadless Area was rated 18 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 84th from the highest (along with 8 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for managing the roadless area in an unroaded condition, but there is very little support for designating the area wilderness. Designation would create a small wilderness with no known features of ecologic, geologic, scientific, or cultural significance in this area. Designation of the area also would add Congressional protection to about 7,600 acres, or 21 percent, of the Kasaan Peninsula Volcanics Ecological Subsection, which does not have any other lands under long-term Congressional protection. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low to moderate.

V. Environmental Consequences

The Kasaan Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. All of the roadless area would be managed under non-development LUDs. This area contains an estimated 5,748 acres of undiscovered locatable mineral resources; all of these acres are considered to have high potential for development. The values associated with the natural settings of the roadless area protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. Because the area is already allocated to non-development LUDs, this conversion would have little effect on existing or future uses. The values associated with the natural settings of the roadless area would be provided long-term protection if designated LUD II. Designation of the area also would add Congressional protection to about 7,600 acres, or 21 percent, of the Kasaan Peninsula Volcanics Ecological Subsection, which does not have any other lands under long-term Congressional protection.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. The potential for development, including recreation, special uses, and mineral, would be restricted. The values associated with the natural settings of the roadless area would be provided long-term protection if designated wilderness. Designation of the area also would add Congressional protection to about 7,600 acres, or 21 percent, of the Kasaan Peninsula Volcanics Ecological Subsection, which does not have any other lands under long-term Congressional protection.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 520 (in acres)								
Land Use Designation	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 4**	**Alt 5**	**Alt 6**	**Alt 7**	**Alt 8**
Recommended Wilderness								7,605
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	7,602	7,602	7,602	7,602	7,602		7,602	
Semi-remote Recreation	3	3	3	3	3		3	
Recommended LUD II						7,605		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production								
TOTAL	**7,605**	**7,605**	**7,605**	**7,605**	**7,605**	**7,605**	**7,605**	**7,605**
Suitable Timber Lands	0	0	0	0	0	0	0	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Duke (521)

ACRES (NFS): 46,863

BIOGEOGRAPHIC PROVINCE: Revilla Island/Cleveland Peninsula

ECOLOGICAL SECTION: Dixon Entrance Lowlands

2003 WILDERNESS ATTRIBUTE RATING: 26

I. Overview and Description

(1) Location and Access: The Duke Roadless Area consists of an island group located south and east across Felice Strait from Annette Island. This area includes Duke, Mary, Hotspur, Dog, Cat, and Percy Islands. This island group is generally bordered to the east by Revillagigedo Channel. Felice Strait generally borders the area to the west and northwest. The south portion of the area (Percy, Hotspur, and Duke Islands) is bordered by Clarence Strait to the west. The open Pacific Ocean borders the area to the south. Metlakatla, on the Alaska Marine Highway, is located approximately 8 miles north of the area. Ketchikan, with regularly scheduled air flights and also on the Alaska Marine Highway, is located about 30 miles to the north.

The lack of safe anchorages and freshwater lakes for floatplane landings essentially makes this roadless area less accessible to the general public, however, people do utilize the few good anchorages to recreate there. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: This roadless area consists of an island group including Duke, Hotspur, Mary, Dog, Cat, and Percy Islands. These islands were used by Alaska Natives in both ancient and historic times and are considered to have special traditional and cultural values. All through the commercial fishing era, the Judd Bay area on Duke Island has been used as anchorage for the fishing fleet. During the 1940s, fox farming occurred on Duke and Hotspur Islands. This island group is exposed to the frequent severe weather out of Dixon entrance. A number of traditional native sites including village sites, campsites, subsistence sites and graves have been identified on these islands by archeological inventory and through oral traditions. Some of these locations are considered sacred to the native community. Historically, Alaska Natives utilized these islands to gather subsistence resources, including bird eggs, hunting, trapping, fishing, and gathering. They also identified trolling for halibut or King Salmon in the vicinity of Cat Island. There are also several mining prospects on Duke and Cat Island along with homesteads and other historic sites. There is a lighthouse and old cabin sites on Mary Island.

(3) Geography and Topography: The islands that comprise this area are characterized by low elevation, subdued topography, and low-lying muskeg systems. The maximum elevation is about 1,500 feet. The area includes Dog Island Research Natural Area with botanical interest and Duke Island Special Interest Area with zoological interest. There are 710 islands and islets that make up this area, 34 of these are greater than 10 acres. There is also a 155-acre homestead in Ryus Bay area USS1162. The Bureau of Land Management (BLM) is investigating whether it was ever patented. The southwest portion of Cat Island and all of Village Island have been conveyed to Seaalaska Corporation by Interim Conveyance. There is a small lighthouse reserve on Mary Island. There are approximately 258 miles of shoreline on saltwater. Rock is mapped on approximately 309 acres and freshwater lakes on 339 acres. There are no mapped alpine or glacier features.

(4) Ecosystem:

(a) Classification: Biogeographic Province. This roadless area is in Revilla Island/Cleveland Peninsula Biogeographic Province. The climate in this area is variable with warm and wet conditions

predominating on land nearest the outer coast and much colder conditions near the mainland. Muskeg ponds are common on Duke Island, attracting many wintering and migratory birds.

Ecological Section/Subsection. The Duke Roadless Area is contained entirely within the Dixon Entrance Lowlands Ecological Section (M247J). This area is represented by one ecological subsection (see table below). The Duke Island Till Lowland Ecological Subsection is generally flat with mafic and ultramafic bedrock covered by peat-based mats. The terrain is mostly wet and supports ericaceous shrubs and low-productive lodgepole pine and mixed-conifer forests (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Dixon Entrance Lowlands	Duke Island Till Lowland	100%

(b) Soils: These highly organic, low mineral content soils are generally formed over bedrock and are typically about 40 inches deep.

(c) Vegetation: These islands are forested with poor quality hemlock, spruce, and cedar. Approximately 2,023 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 43,359 acres mapped as forestland, of which 7,359 acres (17 percent) are mapped as productive old-growth forest. Of the productive old growth, 1,209 acres (16 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 113 acres of high-volume, coarse-canopy old growth. There are 223 acres of second growth where beach timber harvest has occurred in the past.

(d) Fish Resources: One Class I stream on Mary Island, Beaver Creek, provides habitat for coho and pink salmon. Duke Island has 15 unnamed Class I streams, primarily providing habitat for pink and coho salmon. Chum salmon and Dolly Varden char may also be found on Duke Island in the streams at the heads of Hall Cove and Pond Bay.

(e) Wildlife Resources: Duke Island has a small population of Sitka black-tailed deer, and, along the shoreline, the common marine mammals of Southeast Alaska. The islands that comprise this area are frequented by large numbers of sea birds. Wolves, mink, and river otter can be found on Duke Island. Black bear most likely inhabit these islands also. The area is used extensively by wintering waterfowl, including trumpeter swans.

(5) Management Direction and Current Uses: This roadless area was allocated to three Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These three LUDs are Scenic Viewshed, Special Interest Area (SIA) and Research Natural Area (RNA).

LUD	Acres
Scenic Viewshed	191
Special Interest Area	45,959
Research Natural Area	713

Less than 1 percent of this roadless area was allocated to the Scenic Viewshed development LUD. This LUD is located on very small islands off the coast of Duke Island and in the Percy Islands.

Almost 100 percent of the roadless area is allocated to one of two non-development LUDs (Special Interest Area and Research Natural Area). Approximately 98 percent of this roadless area is allocated to the Special Interest Area LUD, named the Duke Island Special Interest Area. This Special Interest Area is a zoologically important area due to its abundant wildlife, especially waterfowl. Dog Island and the small islands around the periphery are allocated to the Research Natural Area LUD, accounting for approximately 2 percent of the roadless area. The Dog Island RNA

was established in 1976 because it represents a small island ecosystem containing the northern limit of Pacific yew (*Taxus brevifolia*).

The lack of access, manageable timber, and freshwater systems has generally precluded active management of these islands, with the exception of the beach logging that has occurred along the shoreline of Mary Island. A few skilled boaters land on the islands to beachcomb on the several sand beaches. Judd Bay on Duke Island has historically been used as an anchorage by commercial fishermen. There was no outfitter/guide use reported in this area in 2000. Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that the three VCUs that comprise this area are subsistence use areas with a high sensitivity to disturbance.

The Mary Island Lighthouse (reserve) is located on the northeast end of Mary Island and there is a small Coast Guard navigational aid site on Duke Island.

(6) Appearance (Apparent Naturalness): The area is in a natural condition with no evidence of human modification, with the exception of the beach logged areas and the lighthouse reserve on Mary Island. This overall pristine setting can be seen from major and minor water-ways and from inside the roadless area itself.

(7) Surroundings (External Influences): The Duke Island Roadless Area is isolated from other land areas by saltwater. Annette Island is located north and northwest across Felice Strait from the area. The Alaska Marine Highway runs through Revillagigedo Channel, which borders the area to the east. This side of the roadless area is, as a result, subjected to the external influence of motorized boats, as well as aircraft flying overhead.

(8) Attractions and Features of Special Interest: A number of traditional native sites including village sites, campsites, subsistence sites, and graves have been identified on these islands by archeological inventory and through oral traditions. The isolation and the rugged coastline interspersed with sandy beaches are special features of this roadless area. The opportunity to view sea birds and mammals on or near the shore is of special interest. Duke Island Special Interest Area is a zoologically important area due to its abundant wildlife, especially waterfowl. The islands have numerous potholes and a maritime climate. It is very desirable for wintering waterfowl and is used extensively by trumpeter swans and marine mammals as haul outs. The area contains four inventoried recreation places, which cover 8,619 acres (18 percent) of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The area's boundaries did not change significantly between 1989 and 2003.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is unmodified, with the exception of the beach logged areas along the shoreline of Mary Island and the Mary Island Lighthouse Reserve on the northeast end of Mary Island. This general lack of modification, along with the area's isolation, provides outstanding natural integrity and very high apparent naturalness. Overall, the area's appearance is suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is very high opportunity for solitude and outstanding opportunity for primitive recreation in this roadless area. People using any of these islands are unlikely to encounter another person during their stay. There was no outfitter/guide use reported in this area in 2000.

The opportunity for primitive recreation is primarily along the coastal areas. There are no recreation attractions inland such as large lakes, streams, or alpine features except for Mt. Lazaro, the tallest point on the islands.

The area primarily provides semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	44,633	95%
Semi-Primitive Motorized (SPM)	2,004	4%

The area contains four inventoried recreation places, which cover 8,619 acres (18 percent) of the roadless area. They are primarily associated with anchorages in the area.

ROS Class	# of Rec. Places	Total Acres
P	4	8,619
SPM	0	0

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Duke Roadless Area was 22 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 26. This rating better reflects the overall high wilderness attributes associated with these islands.

(4) Ecologic and Geologic Values: The Duke Roadless Area consists of an island group including Duke, Mary, Hotspur, and Percy Islands. Duke Island Special Interest Area is a zoologically important area due to its abundant wildlife, especially waterfowl. The Dog Island Research Natural Area represents a small island ecosystem that includes the northern limit of Pacific yew (*Taxus brevifolia*), associated scrub timber and low volume mixed conifer sites. It is not part of a larger unroaded land area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed the largest VCU, Duke Island (767), as a primary salmon producer. None of the VCUs were listed as primary sport fish producers (ADF&G, 1998).

The Anadromous Waters Catalogue (ADF&G, 2000) indicates that there are no fish bearing streams on Percy Island, Hotspur Island, or Cat Island. One Class I stream on Mary Island, Beaver Creek, provides habitat for coho and pink salmon. Duke Island has 15 unnamed Class I streams primarily providing habitat for pink and coho salmon. Chum salmon and Dolly Varden char may also be found in the streams at the heads of Hall Cove and Pond Bay. West Ryus Bay has an estimated annual peak escapement of 39,600 pink salmon and very good coho salmon smolt production capability (ADF&G, 1998).

(b) Wildlife Resources: Duke Island has a small population of Sitka black-tailed deer, and, along the shoreline, the common marine mammals of Southeast Alaska. The islands that comprise this area are frequented by large numbers of sea birds. Wolves, mink, and river otter can be found on Duke Island. Black bear most likely inhabit these islands also. The area is used extensively by wintering waterfowl, including trumpeter swans.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. The Duke Roadless Area is used extensively by wintering trumpeter swans. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their

nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, eight sensitive plant species are known or suspected to occur in the Ketchikan Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are no glaciers or unique geologic features in this area.

(5) Scientific and Educational Values: The area has unique topography with many potholes that rarely freeze in the winter. The rugged, rocky coastline facing the open sea is another special feature of this area. The area is used extensively by wintering waterfowl, including trumpeter swans. The Dog Island Research Natural Area (RNA) is part of this roadless area. This RNA, one of six established on the Tongass National Forest prior to 1996, represents a small island ecosystem containing the northern limit of Pacific yew, associated scrub timber, and low volume mixed conifer sites of southern Southeast Alaska.

Metlakatla is located approximately 8 miles north of the area. Ketchikan is located about 30 miles to the north.

(6) Scenic Values: This area is part of the Coastal Hills visual character type, which is characterized by moderately steep terrain, rounded summits, and elevations up to 4,000 feet. The area is in a natural condition with little apparent evidence of human modification. The only exception includes the beach logged areas and the lighthouse reserve along the shoreline of Mary Island. This pristine setting can be seen from major and minor water-ways, from inside the roadless area, and from the lighthouse on Mary Island. The Duke Island Special Interest Area has abundant wildlife, especially waterfowl.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include Clarence Strait and Revillagigedo Channel, which are both part of the Alaska Marine Highway and tour ship routes. Revillagigedo Channel is also a saltwater use area.

Although this roadless area has very flat landform characteristics, almost the whole area, approximately 97 percent, was inventoried as Variety Class B (possessing landscape characteristics common for the character type) due to the vegetative and waterform diversity, and the diversity of its coastal features, such as the very irregular shoreline and clusters of smaller islands. Approximately 3 percent of the area was not inventoried for Variety Class type.

Approximately 95 percent of this roadless area has been inventoried as Existing Visual Condition Type I, where the landscape has remained unaltered by human activity. Approximately 3 percent is EVC Type III, in which the average person notices changes in the landscape, but they do not attract significant attention. Another 3 percent was not inventoried for EVC.

(7) Social, Cultural, and Historical Values: This roadless area consists of an island group that includes Duke, Hotspur, Mary, Dog, Cat, and Percy Islands. These islands were used by Alaska Natives in both ancient and historic times and are considered to have special traditional and cultural values. A number of traditional native sites including village sites, campsites, subsistence sites, and graves have been identified on these islands by archeological inventory and through oral traditions. Some of these locations are considered sacred to the native community. Historically, Alaska Natives utilized these islands to gather subsistence resources including bird eggs, hunting, trapping, fishing, and gathering. They also identified trolling for halibut or King Salmon in the vicinity of Cat Island. There are also several mining prospects on Duke and Cat Island along with homesteads and other historic sites. There is a lighthouse and old cabin sites on Mary Island.

All through the commercial fishing era, the Judd Bay area on Duke Island has been used as anchorage for the fishing fleet. During the 1940s, fox farming occurred on Duke and Hotspur Islands. This island group is exposed to the frequent severe weather out of Dixon entrance. Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment indicated that the three VCUs that comprise this area are subsistence use areas with a high sensitivity to disturbance. However, none of the VCUs in this area were included among the highest, second, or third most important groups for community use values (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: This roadless area is not easily accessed. It is approachable from the few good existing anchorages, although not heavily used, making this roadless area easy to manage as wilderness or in an unroaded condition.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: The lack of access to any of the islands generally precludes recreation facility development. The only real recreation potential identified during the Forest Plan revision planning process was low density dispersed recreation associated with the sand beaches. Several years ago the Coast Guard wanted to turn this reserve over to the Forest Service. The Forest Service declined this transfer due to accessibility issues and the overall condition of the facilities. This does not mean that the facility could not be a potential recreation destination.

In 1996, the Alaska Visitors Association (AVA) proposed the following recreation developments within this roadless area: a backcountry recreation lodge for 480-persons/day in Duke Island (Pond Bay); a day use wildlife observatory with a 50 person capacity at Hall Cove on Duke Island; and a backcountry recreation lodge for 480 persons/day at Customhouse Cove on Mary Island. The State of Alaska's Central Southeast Area Plan designates their over selection land on Duke Island for recreational development.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: No fisheries enhancement projects have been identified for this area.

(4) Wildlife Resources: There are no plans for wildlife habitat management on these islands and little potential to do so.

(5) Timber Resources: There are 7,359 acres mapped as productive old growth and 223 acres mapped as second growth due to harvest in the roadless area. Of these acres, 6,310 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area, none of this roadless area is classified as suitable for timber production.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences although some bark beetle activity was observed in 1997.

(7) Minerals: There are no existing mining claims in the area. The USGS Mineral Resources Data website (2001) indicates that mineral resources in the area may include iron, nickel, chromite, platinum, and copper.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area.

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a demand for water. There are no existing or planned hydroelectric or domestic water projects within this roadless area.

(10) Areas of Scientific Interest: The area has unique topography with many potholes that rarely freeze in the winter. The rugged, rocky coastline facing the open sea is another special feature of this area. The area is used extensively by wintering waterfowl, including trumpeter swans.

The Dog Island Research Natural Area (RNA) is part of this roadless area. This RNA, one of six established on the Tongass National Forest prior to 1996, represents a small island ecosystem containing the northern limit of Pacific yew, associated scrub timber, and low volume mixed conifer sites of southern Southeast Alaska. Management as wilderness may restrict research activities.

(11) Land Use Authorizations: The Coast Guard has land use authorizations in this area for navigational aids and associated with the lighthouse on Mary Island.

(12) Land Status: All land within the roadless area is part of the National Forest System. Approximately 2,170 acres of land were over-selected by the State at Judd Harbor on Duke Island. The conveyance of this land is still pending as of January 2002.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives an occasional visit by boaters who have the ability to land. There is significant interest in these islands by the local Native communities because of the rich cultural resources found there.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Duke Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition.

(c) Public Input During Forest Plan Revision and Appeals: This area was specifically addressed in public input received during the Forest Plan revision and appeal. The AVA proposed the following recreation developments within this roadless area: a backcountry recreation lodge for 480 persons/day on Duke Island (Pond Bay); a day use wildlife observatory with a 50 person capacity at Hall Cove on Duke Island; and a backcountry recreation lodge for 480 persons/day at Customhouse Cove on Mary Island. Another commenter requested that the safe harbors of Duke Island be open for limited development, such as fishing lodges, moorage buoys, or floats.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area is not within the study area of any recently completed project-level EISs. No project-level comments on this roadless area have been identified.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended that the Duke Island roadless area be designated as LUD II.

At the Ketchikan hearing, the Metlakatla Indian Community expressed general support for logging except on small Islands and used Annette Island as an example of small (Duke is smaller).

Some individuals recommended this area for permanent protection as wilderness.

(2) Nearby Roadless and Wilderness Areas and Uses: This roadless area is approximately between 4 and 8 miles west across Revillagigedo Channel from the Misty Fiords National Monument Wilderness. The South Prince of Wales Wilderness is located about 24 miles to the west.

Annette Island, the closest area of land, is not part of the Tongass National Forest. The closest other roadless areas, located north of Annette Island, are Gravina (#522), Revilla (#524), and South Revilla (#523).

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	250	275
Ketchikan (Pop. 14,070)	30	30
Wrangell (Pop.2,308)	100	125
Petersburg (Pop. 3,324)	135	155

(4) Relative Contribution to the National Wilderness Preservation System: The Duke Roadless Area consists of an island group located south and east across Felice Strait from Annette Island. This area includes Duke, Mary, Hotspur, Dog, Cat, and Percy Islands. This island group is generally bordered to the east by Revillagigedo Channel. Felice Strait generally borders the area to the west and northwest. The south portion of the area (Percy, Hotspur, and Duke Islands) is bordered by Clarence Strait to the west. The open Pacific Ocean borders the area to the south. The islands that comprise the Duke Roadless Area are characterized by low elevation, subdued topography, and low-lying muskeg systems. The maximum elevation is about 1,500 feet.

The area generally appears natural and unmodified. The natural integrity for the area is outstanding and the apparent naturalness is very high. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

The Duke Roadless Area does not contain landscape that is classified as distinctive for the character type from a scenery standpoint. These islands were used by Alaska Natives in both ancient and historic times and have special traditional and cultural values. The unique topography with many potholes that rarely freeze in the winter make this area available for extensive use by wintering waterfowl, including trumpeter swans. The area also includes the Dog Island Research Natural Area. All of the roadless area except the Research Natural Area is managed as a Special Interest Area under the Forest Plan.

The roadless area includes about 1,209 acres of high-volume, old-growth forest. Of these acres, approximately 113 are mapped as high-volume, coarse-canopy old growth.

The Duke Roadless Area is classified as being in the Revilla Island/Cleveland Peninsula Biogeographic Province and makes up about 3 percent of the province. It is one of 12 inventoried roadless areas found within the province which make up about 60 percent of the province. Part of the Misty Fiords National Monument Wilderness is located in this province and makes up about 18 percent of the province. The province also includes two Congressionally designated LUD II areas (Naha and Anan), which make up about 5 percent of the province.
The Duke Roadless Area lies completely within the Dixon Entrance Lowlands Ecological Section and represents 9 percent of the ecological section. Existing wilderness is well represented (56 percent) in the Dixon Entrance Lowlands Ecological Section and an additional 28 percent is protected by other existing non-development LUDs.

The entire (100 percent) roadless area is in the Duke Island Till Lowland Ecological Subsection; this portion represents 73 percent of the ecological subsection. None of this ecological subsection is in existing wilderness or LUD II, but 72 percent is protected by other existing non-development LUDs.

The Duke Roadless Area was rated 26 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 5th from the highest (along with 6 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is considerable local and national support for managing this area in an unroaded condition but very little support for designation as wilderness. Designation would provide long-term Congressional protection for 73 percent of the Duke Island Till Lowland Ecological Subsection; a subsection which does not have any areas within wilderness or LUD II. Wilderness designation for the Duke Roadless Area would create a wilderness with very high cultural and ecological values. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be high to very high.

V. Environmental Consequences

The Duke Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. All of the roadless area would be managed under non-development LUDs. The values associated with the natural settings of the roadless area are protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. Because the area is already allocated to non-development LUDs, this conversion would have little effect on existing or future uses. The values associated with the natural settings of the roadless area, including the cultural and ecologic values, would be provided long-term protection if designated LUD II. Designation would provide long-term Congressional protection for 73 percent of the Duke Island Till Lowland Ecological Subsection; a subsection which does not have any areas within wilderness or LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. The potential for development, including recreation, special uses, and mineral, would be restricted.. The values associated with the natural settings of the roadless area, including the cultural and ecologic values, would be provided long-term protection if designated wilderness. Designation would provide long-term Congressional protection for 73 percent of the Duke Island Till Lowland Ecological Subsection; a subsection which does not have any areas within wilderness or LUD II.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 521 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								46,863
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area	713	713	713	713	713		713	
Special Interest Area	45,959	45,959	45,959	45,959	45,959		45,959	
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat								
Semi-remote Recreation								
Recommended LUD II						46,863		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	191	191	191	191	191		191	
Modified Landscape								
Timber production								
TOTAL	**46,863**	**46,863**	**46,863**	**46,863**	**46,863**	**46,863**	**46,863**	**46,863**
Suitable Timber Lands	0	0	0	0	0	0	0	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Gravina (522)

ACRES (NFS): 38,978

BIOGEOGRAPHIC PROVINCE: Revilla Island/Cleveland Peninsula

ECOLOGICAL SECTION: Inside Passage Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 21

I. Overview and Description

(1) Location and Access: This roadless area is located on the south and west side of Gravina Island. Non-National Forest System lands border the area to the north and part of the east. Clarence Strait and Nichols Passage border the island to the west and east, respectively. Ketchikan, with regularly scheduled air flights and on the Alaska Marine Highway, is located approximately 10 miles east of the area. Metlakatla, also on the Alaska Marine Highway, is located approximately 5 miles southeast across Nichols Passage.

The area may be accessed from the adjacent non-National Forest System lands and via boat, floatplane, and airport ferry. Many people access the interior of the island by riding the airport ferry and then hiking on primitive trails from the airport. There are no places suitable for landing wheeled airplanes within the roadless area.

(2) History: This roadless area includes all of the National Forest System lands on Gravina Island except that portion which contains a road that extends from Vallenar Bay. Gravina Island was used by prehistoric and historic Alaska Native cultures and has also been an integral part of the development of Ketchikan and southern Southeast Alaska. The north end of Gravina Island was reserved for the development of the city of Ketchikan. Since the early days of the developing fishing, mining, and timber industries, almost all of the northern, eastern, and some of the southern and western coastlines of the island have been influenced by settlers building home and cabin sites, storage shelters, and anchorage facilities. Handlogging has occurred around the island's shoreline. To this day, remnants of these sites can be found. There are at least 33 known heritage sites within this area. Nine are prehistoric sites, 22 are historic sites, and 2 are paleontological sites. Prehistoric sites include fish weirs, fish traps, and rock shelters. Historic sites include homesites, fish camps, mining activity, and aircraft navigational beacons (USDA Forest Service, 2001). Goldschmidt and Haas (1946) identified commercial fish traps along the shorelines of this area and a former camp on the west shore of Bostwick Inlet. They also identified berrying, hunting/trapping, and salmon fishing in the vicinity of this inlet.

(3) Geography and Topography: The area is characterized by low elevation and subdued topography, a rugged backbone ridge, and muskeg flats. The maximum elevation is 2,700 feet. There are 78 miles of shoreline on saltwater, approximately 526 acres of alpine, approximately 126 acres of rock, and 67 acres of freshwater lake. The area contains 223 islands and islets totaling 312 acres.

(4) Ecosystem:

(a) Classification: Biogeographic Province. This roadless area is in Revilla Island/Cleveland Peninsula Biogeographic Province. The climate in this area is variable with warm and wet conditions predominating on land nearest the outer coast and much colder conditions near the mainland. Revilla, Gravina, and Annette Islands are influenced by human activities and populations.

Ecological Section/Subsection. The Gravina Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E). This area is represented by one ecological subsection. (see table below). The Clarence Strait Volcanics Ecological Subsection consists of volcanic peaks bordering the

eastern side of Clarence Strait in a southwesterly or northeasterly direction. Glaciers have smoothed the topography and left a legacy of broad valleys, steep slopes, alpine lakes, hanging valleys, and coastal lowlands. Plant cover is dependent on soil permeability and much of the Clarence Strait Volcanics Ecological Subsection is not forested. Productive hemlock or hemlock-spruce forests are limited to well-drained slopes (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Inside Passage Fjordlands	Clarence Strait Volcanics	100%

(b) Soils: Soils in this area are highly organic with low clay content and are generally formed over bedrock. Soil depths range to 40 inches.

(c) Vegetation: This area is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with a moderate cedar component. Approximately 701 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 37,311 acres mapped as forestland, of which 18,847 acres (50 percent) are mapped as productive old-growth forest. Of the productive old growth, 7,152 acres (38 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 1,919 acres of high-volume, coarse-canopy old growth. The area also includes 354 acres of second growth where timber harvest has occurred in the past.

(d) Fish Resources: The Alaska Department of Fish and Game (ADF&G) rated fish resources as part of its Forest Habitat Integrity Program (1983). These ratings describe the value of VCUs for sport fish, commercial fish, and estuaries. One VCU was rated highly for estuary value. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list any VCUs in this area as primary salmon or sportfish producers.

The two largest watersheds with the greatest salmon production are Bostwick and Vallenar Creeks. Pink, chum, and coho salmon, and steelhead trout are found in the streams in this area.

(e) Wildlife Resources: This area has populations of Sitka black-tailed deer, some black bear and wolves, and populations of marten, mink, and beaver. Bald eagles are also found within the area. Brown bear, moose, and mountain goats do not inhabit Gravina Island (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to five different Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These LUDs are Timber Production, Scenic Viewshed, Minerals, Old-growth Habitat, and Semi-remote Recreation. The Minerals LUD is a secondary LUD that overlays the other land use designations.

LUD	Acres
Timber Production	17,262
Scenic Viewshed	7,329
Minerals*	4,329
Old-growth Habitat	14,210
Semi-remote Recreation	177

* Note that acres in the Minerals LUD are included in the Scenic Viewshed and Old-Growth LUD acres.

Approximately 63 percent of the roadless area (not including the LUD overlay) was allocated to one of two developments LUDs (Timber Production, Scenic Viewshed). Approximately 44 percent of this area was allocated to the Timber Production LUD. The Scenic Viewshed LUD was assigned to approximately 19 percent of the

roadless area. Approximately 11 percent of this roadless area was allocated to the Minerals LUD overlay. The south end of the area, in the vicinity of Dall Head and Nehenta Bay, was allocated to the Minerals LUD overlay.

Approximately 37 percent of the roadless area was allocated to a non-development LUD (Old-growth Habitat and Semi-remote Recreation). Approximately 37 percent of the roadless area was allocated to the Old-growth Habitat LUD. Lands allocated to this LUD are located mostly west of Dall Ridge. Smaller islands associated with the roadless area are allocated to the Semi-remote Recreation LUD, accounting for less than 1 percent of the roadless area.

An electronics site is located on High Mountain. There is good opportunity for primitive recreation in the interior of the island and along the southwest coast. The latter area includes good saltwater fishing and the Phocena Bay public recreation cabin. There was no outfitter/guide use reported in this area in 2000. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that the five VCUs wholly or partially located within this area are subsistence use areas.

The Gravina Island Timber Sale DEIS (USDA Forest Service, 2001) identified two preferred alternatives that would make between 31 and 37 million board feet (MMBF) of timber available in multiple sales. These sales would occur entirely within the Gravina Roadless Area. Four potential timber sales in this area are identified in the Forest Service's 10-Year Action Plan. Three of these sales are proposed as part of the Gravina Island Timber Sale DEIS. These sales are the Fling Timber Sale, estimated to consist of 6 MMBF and scheduled for 2003, the Dutchman Timber Sale, estimated to consist of 18 MMBF and scheduled for 2004, the Abney Timber Sale, estimated to consist of 6 MMBF and scheduled for 2005. The Smooth Mountain Sale, estimated to consist of 19 MMBF, is scheduled for 2011. The Gravina Island Timber Sale DEIS also proposes to make several modifications to small Old-growth Habitat Reserves, in line with the recommendations of interagency biologists. This would make some adjustments to the LUDs for the area.

(6) Appearance (Apparent Naturalness): Almost all of this area has remained unaltered by human activity. Exceptions include areas that have had timber harvesting and evidence of human habitation along some of the coastal areas, including Vallenar Bay. Beach logging has occurred in the general vicinity of Phocena Cove, Nelson Cove, and in a relatively small area on the east shore of Bostwick Inlet. Small areas have also been logged in the north portion of the area and inland, west of Bostwick Inlet. Most of these areas were harvested decades ago and are natural appearing to the average observer. Otherwise, the area appears to be in a natural state and generally unmodified by humans. Two exceptions are the public recreation cabin and the radio tower on High Mountain. However, these features have little effect on the area's overall natural setting. The area generally displays natural characteristics when viewed from major and minor water travel routes and when inside the area.

(7) Surroundings (External Influences): Gravina Island is heavily influenced by the urban growth in the greater Ketchikan area. The Ketchikan International airport is on the northern end of the island. Flight patterns cause noise and visual influence within the roadless area. State selections extend into the roadless area causing an irregular boundary. State lands are dedicated for community development, timber harvest, and expansion. Therefore, their impact upon the roadless area will likely increase over time. A forest road and associated timber harvest units extend along Vallenar Creek into the north part of the area. Clarence Strait borders the area to the west. Nichols Passage and Bostwick Inlet partially border the area to the east. The majority of the area's south border is also formed by saltwater. There is near constant sports and commercial fishing along the coast causing a constant drone of boat engines in the area, which subsides somewhat during the winter months. Jets and floatplanes routinely pass overhead.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, the saltwater bays and inlets, and the opportunity to see wildlife and to study the processes that formed this country may all be attractions. The area contains eight inventoried recreation places, which cover 25,871 acres (66 percent) of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of this roadless area did not significantly change between 1989 and 2003. One exception is the beach-logged areas (i.e., areas that were logged but not roaded) that were excluded from the 1990 area. These areas are included as part of the 2003 area.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area appears unmodified except for the areas that have been logged and the trace remains of human activity that occurred during the early 1900s. The urban growth, diverse land ownership, and the airport disrupt the natural integrity of this area. Overall, the area has very high natural integrity and apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The opportunity for solitude within the area is moderate and the opportunity for primitive recreation is high. Along the coast, there is near constant sports and commercial fishing causing a constant drone of boat engines. Within the area, people can see jets and floatplanes overhead and hear their engines, although a person entering the interior of this roadless area is not likely to meet other humans. There was no outfitter/guide use reported in this area in 2000.

The opportunity for primitive recreation is best in the interior of the island and along the southwest coast. The latter area possesses good saltwater fishing and a public recreation cabin. Some of the primitive recreation opportunities in this area may be affected in the future by development on the extensive State and private lands in the area. The eastern side of the island near Ketchikan is heavily influenced by jet and other airline and boat traffic.

The area primarily provides primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	24,871	64%
Semi-Primitive Motorized (SPM)	12,829	33%
Roaded Motorized (RM)	286	1%
Rural (R)	941	2%

The area contains eight inventoried recreation places, which cover 25,871 acres (66 percent) of the roadless area.

ROS Class	# of Rec. Places	Total Acres
P	3	15,157
SPM	5	10,555
RM	0	0
R	1	160

A public recreation cabin is available at the Dall Bay State Marine Park, just south of the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Gravina Roadless Area was 22 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 21. The difference is more reflective of ongoing activities adjacent to the area and those influences on solitude and primitive recreation opportunities.

(4) Ecologic and Geologic Values: The Gravina Roadless Area is located on Gravina Island. Non-National Forest System lands border the area to the north and part of the east. The area is not part of a larger roadless area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list any VCUs in this area as primary salmon or sportfish producers.

The two largest watersheds with the greatest salmon production in the area are Bostwick and Vallenar Creeks. Pink, chum, and coho salmon, and steelhead trout are found in the streams in this area. Information from ADF&G indicates that Bostwick Creek had an average annual peak escapement of 15,280 pink salmon for the years 1992 to 2001.

(b) Wildlife Resources: This area has populations of Sitka black-tailed deer, some black bear and wolves, and populations of marten, mink, and beaver. Brown bear, moose, and mountain goats do not inhabit Gravina Island (MacDonald and Cook, 1999). According to the Gravina Island Timber Sale DEIS (USDA Forest Service, 2001), 17 bald eagle nests have been identified in this area on National Forest System land. Queen Charlotte goshawks have been identified in the vicinity of Phocena Bay, trumpeter swans were observed at Bostwick Lake and Inlet, and Ospreys are believed to migrate through the area.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Trumpeter swans have been observed at Bostwick Lake and Inlet. Present from April through September, ospreys are rare in Southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. The species has been identified in the vicinity of Phocena Bay. In addition, eight sensitive plant species are known or suspected to occur in the Ketchikan Ranger District. Two sensitive plants, Calder lovage and loose-flowered bluegrass, have been identified in this roadless area (USDA Forest Service, 2001).

(d) Karst, Cave, and Other Geologic Resources: There is a band of mostly high vulnerability karst in this roadless area, around the southern portion of Punch Hill. The karst resources in this area encompass 688 acres (2 percent) of the roadless area. About one-third of the karst is mapped as high vulnerability karst. There are no glaciers or unique geologic features.

(5) Scientific and Educational Values: There are no known special features or Research Natural Areas located in this area. Ketchikan, the closest community, is located approximately 3 miles east of the area. Metlakatla is located approximately 6 miles southeast across Nichols Passage. However, the Gravina Roadless Area is not readily accessible to school-age children.

(6) Scenic Values: This area is part of the Coastal Hills visual character type, which is characterized by moderately steep landforms, predominantly rounded summits, elevations up to 2,700 feet, and flat floored, U-shaped valleys. The Gravina Roadless Area is, for the most part, very representative of this character type. Overall, with the exception of the areas that have been logged and the evidence of human habitation along some of the coastal areas, the area appears to be in a natural state and generally unmodified by humans. Two other exceptions are the Phocena Cove public recreation cabin and the radio tower on High Mountain. However, these features have little effect on the area's overall natural setting.

The area generally displays natural characteristics when viewed from major and minor water travel routes and when inside the area. Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include: Clarence Strait (Alaska Marine Highway and Tour Ship Route); Vallenar Bay, Bostwick Inlet, Nichols Pass, Dall Bay, Blank Inlet, and Tongass Narrows (Saltwater Use Areas); Phocena Cove cabin (Public

Recreation Cabin); Tongass Highway (Public Use Road); Dall Bay (State Marine Park); and Ketchikan, Saxman, and Metlakatla (Communities).

Approximately 96 percent of the area was inventoried as Variety Class B (possessing characteristics that are common in the character type). The more distinctive and rugged landforms are found in the Dall Head area of Gravina Island. Approximately 4 percent of the area was not inventoried fro Variety Class type.

Approximately 85 percent of this area was inventoried as Type I Existing Visual Condition where the landscape has remained unaltered by human activity. Another 4 percent was classified as EVC II. Approximately 7 percent was classified as EVC III, where the average person notices changes in the landscape, but they do not attract significant attention. Approximately 4 percent was not inventoried for EVC.

(7) Social, Cultural, and Historical Values: This roadless area includes all of the National Forest System lands on Gravina Island except that portion which contains a road that extends from Vallenar Bay. Gravina Island was used by prehistoric and historic Alaska Native cultures and has also been an integral part of the development of Ketchikan and southern Southeast Alaska. The north end of Gravina Island was reserved for the development of the city of Ketchikan. Since the early days of the developing fishing, mining and timber industry, almost all of the northern, eastern, southern and some of the western coastlines of the island have been influenced by settlers building home and cabin sites, storage shelters, and anchorage facilities. Handlogging occurred around the island's shoreline. To this day, remnants of these sites can be found. There are at least 33 known heritage sites within this area. Nine are prehistoric sites, 22 are historic sites, and 2 are paleontological sites. Prehistoric sites include fish weirs, fish traps, and rock shelters. Historic sites include homesites, fish camps, mining activity, and aircraft navigational beacons (USDA Forest Service, 2001). Goldschmidt and Haas (1946) identified commercial fish traps along the shorelines of this area and a former camp on the west shore of Bostwick Inlet. They also identified berrying, hunting/trapping, and salmon fishing in the vicinity of this inlet.

There is good opportunity for primitive recreation in the interior of the island and along the southwest coast. The latter area includes good saltwater fishing and the Phocena Cove public recreation cabin. There was no outfitter/guide use reported in this area in 2000. The Tongass Fish and Wildlife Resource Assessment indicated that the five VCUs wholly or partially located within this area are subsistence use areas with a high sensitivity to disturbance. However, none of the VCUs in this area were included among the VCUs with the highest, second or third most important community use values (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The irregular State land boundaries would make it difficult to manage this area in a wilderness or roadless condition. These boundaries do not take advantage of natural topographic features and, in most cases, are on relatively flat ground. These ownership property boundaries are surveyed and marked on the ground. Access to other ownerships would be difficult to control.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: There is potential for trail development connecting the east side of Gravina Island along Tongass Narrows to Bostwick Lake and Inlet. The State of Alaska would be involved in this development.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation. However, subsistence could be affected by the Gravina Timber
Timber Sale and associated road network.

(3) Fish Resources: No fish habitat enhancement projects are planned for this roadless area.

(4) Wildlife Resources: No wildlife enhancement projects are planned for this roadless area.

(5) Timber Resources: There are 18,847 acres mapped as productive old growth and 354 acres mapped as second growth in the roadless area. Of these acres, 16,034 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 4,468 acres (11 percent) of this roadless area are estimated to be suitable for timber production. Approximately 1,467 of the suitable acres are mapped as high-volume old growth; of these acres, 360 are mapped as high-volume, coarse-canopy old growth.

The Gravina Island Timber Sale DEIS (USDA Forest Service, 2001) identified two preferred alternatives that would make between 31 and 37 million board feet (MMBF) of timber available in multiple sales. These sales would occur entirely within the Gravina Roadless Area. Four potential timber sales in this area are identified in the Forest Service's 10-Year Action Plan. Three of these sales are proposed as part of the Gravina Island Timber Sale DEIS. These sales are the Fling Timber Sale, estimated to consist of 6 MMBF and scheduled for 2003, the Dutchman Timber Sale, estimated to consist of 18 MMBF and scheduled for 2004, the Abney Timber Sale, estimated to consist of 6 MMBF and scheduled for 2005. The Smooth Mountain Sale, estimated to consist of 19 MMBF, is scheduled for 2011.

(6) Fire, Insects, and Disease: There is evidence of fire within the area, which occurred in the early part of the 1900s. This fire occurrence took place east of Phocena Bay. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: The southern end of Gravina Island has a history of mineral exploration and gold mining. Prospecting is presently occurring. This area was allocated to the Minerals LUD in the 1997 Tongass Land Management Plan Revision. There is potential for future mine development. The USGS (2001) indicates that mineral resources in the area include copper, silver, gold, and zinc.

This area contains 4,477 acres of land identified as a mineral activity tract having a high potential for expanding mineral exploration or development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). A total of 4,329 of these acres are allocated to the Minerals LUD. The Minerals LUD is intended to encourage the prospecting, exploration, development, mining, and processing of locatable minerals in areas with the highest potential for minerals development. It contains standards and guidelines to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when mineral developments occur. In addition, this area contains an estimated 38,978 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991), all of which are considered to have low potential for development.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area.

(9) Water Availability and Use: The Phocena Bay public recreation cabin is the only facility in this area where water is used for drinking. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: There are no areas of particular scientific interest located in this area.

(11) Land Use Authorizations: Several permitted electronics sites are located on High Mountain.

(12) Land Status: All land within the roadless area is part of the National Forest System. Encumbered land within the roadless area is located around Bostwick Inlet.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives significant local use for general hunting, subsistence and some recreation activity.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Gravina Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition.

(c) Public Input During Forest Plan Revision and Appeals: This area was specifically addressed in public input received during the Forest Plan revision. A number of commenters felt that better road systems on Gravina and Revilla Islands would benefit Ketchikan residents by creating more recreation opportunities. One timber company requested that small scale logging be allowed on Gravina Island.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: Gravina Island was one of the few areas in Southeast Alaska that was specifically referenced in public input during the Roadless Area Conservation Rule and Road Management Policy Review. Local Native Councils have requested that Gravina Island remain a roadless area because it has been used historically, and is still used, by Alaska Native people from the Ketchikan, Metlakatla and Saxman areas for subsistence fishing, gathering, and hunting. The Tribal Councils stated that all of the proposed or potential development activities would jeopardize the subsistence areas on Gravina, especially Bostwick Inlet.

(e) Public Input Expressed for Project-level EISs and Other Input: Considerable public input was received in response to the Gravina Island Timber Sale DEIS (USDA Forest Service, 2001). This public input, which is presently being reviewed, included comments that opposed the sale and others that supported it. Commenters opposing the sale generally cited the effects that logging Gravina Island and Bostwick Inlet in particular would have on subsistence use of the area. The potential effects of logging on the visual resources of the area, as viewed from Ketchikan, recreation, and fish and wildlife habitat were also identified as concerns.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Department of Fish and Game rated the Gravina roadless area as the third highest priority for protection in the Ketchikan Area (outside of POW Island). This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

SEACC recommended that the Gravina Island roadless area be designated as LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended the Gravina Island roadless area for permanent protection as LUD II. The Tongass Conservation Society recommended the Gravina Island roadless area for permanent protection as LUD II.
Audubon Alaska recommended that Gravina should be protected from logging and road building.

Ketchikan Indian Community passed a tribal resolution endorsing "…the congressionally designated roadless area on Gravina Island for wilderness." At the Ketchikan hearing, the Metlakatla Indian Community stated "…don't log Gravina." And, "Small islands can't take logging."

Some members of the Southeast Alaska Federal Subsistence Regional Advisory Council identified the need for further protection of this area because of its importance for subsistence.

Many other commenters also recommended Gravina Island for protection, especially Bostwick Inlet. Some individuals recommended this area for permanent protection as wilderness.

(2) Nearby Roadless and Wilderness Areas and Uses: The Misty Fiords National Monument Wilderness is located approximately 19 miles east of the Gravina Roadless Area. The South Prince of Wales Wilderness is located approximately 24 miles to the west.

The North Revilla (#526) Roadless Area is located approximately 4 miles north of the area. The Revilla Roadless Area (#524) is located approximately 5 miles to the east. The McKenzie Roadless Area (#519) is located approximately 6 miles west across Clarence Strait. Other relatively close roadless areas include the Duke (#521), Behm Islands (#525), and Cleveland (#528) Roadless Areas.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	225	230
Ketchikan (Pop. 14,070)	10	10
Wrangell (Pop.2,308)	80	95
Petersburg (Pop. 3,324)	110	110

(4) Relative Contribution to the National Wilderness Preservation System: The Gravina Roadless Area is located on the south and west side of Gravina Island. Non-National Forest System lands border the area to the north and part of the east. Clarence Strait and Nichols Passage border the island to the west and east, respectively. The roadless area is characterized by low elevation and subdued topography, a rugged backbone ridge, and muskeg flats. The maximum elevation is 2,700 feet.

Most of the area is natural appearing. It has very high natural integrity and apparent naturalness. The opportunity for solitude is moderate and the opportunity for primitive recreation is high.

None of the landscape in this area is considered distinctive from a scenery standpoint. There is a small area of karst in the roadless area. The roadless area has cultural and historic values. There are no other known special features in this area.

The roadless area includes about 7,152 acres of high-volume, old-growth forest. Of these acres, approximately 1,919 are mapped as high-volume, coarse-canopy old growth.

The Gravina Roadless Area is classified as being in the Revilla Island/Cleveland Peninsula Biogeographic Province and makes up about 3 percent of the province. It is one of 12 inventoried roadless areas found within the province which make up about 60 percent of the province. Part of the Misty Fiords National Monument Wilderness is located in this province and makes up about 18 percent of the province. The province also includes two Congressionally designated LUD II areas (Naha and Anan), which make up about 5 percent of the province.

The Gravina Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents 1 percent of the ecological section. Approximately 20 percent of the Inside Passage Fjordlands Ecological Section is in existing wilderness, 2 percent is in existing LUD II and 30 percent is protected by other existing non-development LUDs.

All (100 percent) of the roadless area is in the Clarence Strait Volcanics Ecological Subsection. The roadless area represents 15 percent of the entire ecological subsection, 15 percent of which is in existing wilderness and is well represented by other existing non-development LUDs (34 percent).

The Gravina Roadless Area was rated 21 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 47th from the highest (along with 5 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for managing this area in an unroaded condition, and there is little support for designation of the area as wilderness. Designation would create a wilderness with relatively high cultural and historic values but with no other significant features. It would be next to Ketchikan and extensive State and private lands that are likely to be developed for urban related purposes in the near future. Overall, the factors identified here indicate that the relative contribution of this roadless area to the National Wilderness Preservation System would be low to moderate.

V. Environmental Consequences

The Gravina Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 37 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 63 percent of the roadless area. The land in the development LUDs includes an estimated 4,468 acres that are suitable for timber production (7 percent of the suitable acres on the Ketchikan/Misty Fiords Ranger District). Approximately 360 of the suitable acres are classified as high-volume, coarse-canopy old growth. The southern end of Gravina Island has a history of mineral exploration and gold mining. Prospecting is presently occurring and there is potential for future mine development. This area contains 4,477 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains an estimated 38,978 acres of undiscovered locatable mineral resources that are considered to have low potential for development. The recreation, minerals, and special use programs would continue. Timber harvest planning in the area would continue. The values associated with the natural settings of the roadless area could be affected by development activities allowed under the Forest Plan. The cultural, historic, and karst values are protected under the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, special uses, and minerals programs could continue similar to current conditions. No timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the cultural, historic, and karst values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. No timber harvest would be allowed. The ongoing recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the cultural, historic, and karst values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 522 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								38,978
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	14,210	14,210	14,210	14,210	14,210		14,210	
Semi-remote Recreation	177	177	177	177	177		177	
Recommended LUD II						38,978		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	7,329	7,329	7,329	7,329	7,329		7,329	
Modified Landscape								
Timber production	17,262	17,262	17,262	17,262	17,262		17,262	
TOTAL	**38,978**	**38,978**	**38,978**	**38,978**	**38,978**	**38,978**	**38,978**	**38,978**
Suitable Timber Lands	4,468	4,468	4,468	4,468	4,468	0	4,468	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: South Revilla (523)

ACRES (NFS): 53,559

BIOGEOGRAPHIC PROVINCE: Revilla Island/Cleveland Peninsula

ECOLOGICAL SECTION: Inside Passage Fjordlands, Dixon Entrance Lowlands

2003 WILDERNESS ATTRIBUTE RATING: 20 (19, 20, 22)

I. Overview and Description

(1) Location and Access: The South Revilla Roadless Area is located on the southwest quarter of Revillagigedo Island (also known as Revilla Island). The area includes parts of three peninsulas and Bold Island, which is located south of the central peninsula. It also includes other smaller islands associated with the roadless area. Misty Fiords National Monument Wilderness borders the area to the east and part of the north. Non-National Forest System lands, saltwater, and timber harvest areas comprise the remainder of the north border. George Inlet borders the area to the west. The three peninsulas are separated by Thorne Arm and Carroll Inlet. Revillagigedo Channel borders the area to the south.

Ketchikan, with regularly scheduled air flights and on the Alaska Marine Highway, is approximately 5 miles west of the area. The city of Saxman is located approximately 4 miles to the west. Metlakatla, also on the Alaska Marine Highway, is located approximately 10 miles to the southwest. Access may be gained to the area from the adjacent road systems or via saltwater. The road system is accessible from Shoal Cove. Forest roads and harvest units extend into the central and east peninsulas. These developments are excluded from the roadless area but provide general access. These roads do not connect to other existing road systems on Revilla Island and are not maintained for passenger vehicles. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes. Black Mt. Trail is located within the southwest portion of this roadless area, and there are two trails (Low Lake and Gokachin) located in the north portion of the area. There are also three mooring buoys for public use; One at Icehouse Cove, and two within Thorne Arm at Fish Creek and Sea Level Mine. A hiking trail is located in the north portion of the area in the vicinity of Gokachin and Fish Creeks.

(2) History: Prehistoric and historic Alaska Native cultures used this roadless area. A number of prehistoric and historic sites have been identified through archeological surveys, oral histories, and other historical records. Goldschmidt and Haas (1946) identified commercial fish traps along the Revillagigedo Channel shoreline in this area. In more recent history, homesteading occurred in Icehouse Cove and one site is still used as a summer residence. The Thorne Arm area has been prospected for minerals resulting in the Sealevel Mine being patented. This was once occupied by a major community and industrial site, including a railroad. This mine has since been abandoned. In the 1950s, timber harvest was initiated and is continuing to progress into unroaded areas.

(3) Geography and Topography: This area is part of the Revilla Island/Cleveland Peninsula Province. This province is characterized by a combination of rugged and gentle terrain. The steep mountain slopes generally rise up to about 2,500 feet with the uppermost elevation being above timberline. Most of the gentle terrain is located at the head end of the Thorne Arm. There are 88 miles of saltwater shoreline and approximately 67 islands and islets (5 of these are greater than 10 acres) totaling 163 acres. The area is covered by 375 acres of alpine tundra, 40 acres of rock, and 574 acres of freshwater lakes.

(4) Ecosystem:

(a) Classification: Biogeographic Province. This roadless area is in Revilla Island/Cleveland Peninsula Biogeographic Province. The climate in this area is variable with warm and wet conditions

predominating on land nearest the outer coast and much colder conditions near the mainland. Revilla, Gravina, and Annette Islands are influenced by human activities and populations. Revilla Island has many exceptional estuaries.

Ecological Section/Subsection. The South Revilla Roadless Area is contained within the Inside Passage Fjordlands Ecological Section (M247E) and the Dixon Entrance Lowlands Ecological Section (M247J). These areas are represented by three ecological subsections (see table below). The Thorne Arm Granitics Ecological Subsection (80% of the roadless area) is underlain by a granitic batholith with a band of carbonates extending along the upper boundaries of the ecological subsection. The terrain is generally moderately sloped though deeply incised drainages occur within the marbles and limestone. Forested wetlands of the lower slopes and valley comprise almost half of this landscape. The well-drained slopes of the granitic mountains support productive western hemlock forests while the carbonate mountains support highly productive hemlock and spruce forests. The Princess Bay Volcanics Ecological Subsection (13% of the roadless area) is a volcanic landscape of basaltic flows and cinder cones. The soils are generally mineral and support productive hemlock and hemlock-spruce forests on well-drained slopes. Lodgepole pine forested wetlands comprise over half the gently sloped landscape. The Traitors Cove Metasediments Ecological Subsection (7% of the roadless area) is composed mostly of glacially carved sedimentary rock. Steep slopes give way to deeply incised valleys. Productive hemlock and Sitka spruce forests grow on well-drained soils on slopes. Forested wetlands are found in poorly drained soils along the valley floors (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Dixon Entrance Lowlands	Thorne Arm Granitics	80%
	Princess Bay Volcanics	13%
Inside Passage Fjordlands	Traitors Cove Metasediments	7%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock and are typically about 40 inches deep.

(c) Vegetation: This area is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with a large cedar component. There are interspersed areas of the muskeg and alpine vegetative types. Approximately 416 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Approximately 375 acres of alpine vegetation have been mapped for the area.

There are approximately 51,315 acres mapped as forestland, of which 21,858 acres or 43 percent are mapped as productive old-growth forest. Of the productive old growth, 8,841 acres or 40 percent are mapped as high-volume old-growth forest. The productive old growth includes about 300 acres of high-volume, coarse-canopy old growth. The area also includes 286 acres of second growth where beach timber harvest has occurred in the past.

(d) Fish Resources: Streams in this area support pink, chum, coho, and sockeye salmon, as well as cutthroat trout, rainbow/steelhead trout, and Dolly Varden char. There are a number of unnamed Class I streams in this area, plus several highly productive streams east of Thorne Arm, including Fish Creek, Sea Level (Gokachin) Creek, and the stream draining into Lucky Cove.

(e) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, wolves, marten, beaver, mink, loon, and common waterfowl. Trumpeter swans, Canada geese, northern goshawk, and marbled murrelets also inhabit the area.

(5) Management Direction and Current Uses: This roadless area was allocated to six different Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These six LUDs are Timber Production, Scenic Viewshed, Modified Landscape, Semi-remote Recreation Old-growth Habitat, and Wild River.

LUD	Acres
Timber Production	16,499
Scenic Viewshed	4,297
Modified Landscape	2,045
Semi-remote Recreation	22,491
Old-growth Habitat	7,988
Wild River	239

Approximately 43 percent of the roadless area was allocated to a development LUD (Timber Production, Scenic Viewshed, Modified Landscape). Approximately 31 percent of this area was allocated to the Timber Production LUD. Scenic Viewshed LUD was assigned to approximately 8 percent of the area. Approximately 4 percent of the roadless area, along the coasts of Carroll Inlet and Thorne Arm, was allocated to the Modified Landscape LUD.

Most of the roadless area, 57 percent, was allocated to one of three non-development LUDs (Semi-remote Recreation, Old-growth Habitat, Wild River). Approximately 42 percent of this roadless area was allocated to the Semi-remote Recreation LUD. This area includes most of the land between Carroll Inlet and Thorne Bay, the California Head area, and Bold Island. Approximately 15 percent of the land in this area was allocated to the Old-growth Habitat LUD. Less than one percent of the roadless area was allocated to the Wild River LUD around Fish Creek.

This roadless area surrounds private inholdings associated with the Sea Level Mine on the east shore of upper Thorne Arm and another inholding about 2 miles north of Moth Bay.

There is a mooring buoy in Icehouse Cove that is related to the Black Mt. Trail and the buoy at the Sea Level Mine Site. Recreation use in the area includes hiking, hunting, beachcombing, saltwater and stream fishing, boating, canoe/kayaking, camping, and scenic and wildlife viewing. Three outfitter/guides served clients for a total of 56 recreation days in and around this roadless area in 2000. Freshwater fishing and transportation were the main outfitter/guide activities pursued in this area. There is one Public Recreation Cabin (Fish Creek Cabin), a mooring buoy, and a hiking trail located at Fish Creek. Some subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that seven of the eight VCUs wholly or partially located within this area are subsistence use areas with a high sensitivity to disturbance.

The Sea Level Timber Sale FEIS (USDA Forest Service, 1999) selected an alternative that made available approximately 51 million board feet (MMBF) of timber in multiple sales. A portion of the Madder Timber sale (25.9MMBF) and all of the Orion Timber Sale (12.2MMBF), which were cleared by the Sea Level FEIS and are currently under contract, are within the South Revilla Roadless Area. Additional sales include: Mop Point, 91 Knot (NEPA Cleared .7MMBF/sale in 2002), Southside Small sales (.5MMBF 2005), Saw Ridge (14MMBF in 2008), and Beaver (19MMBF in two sales in 2011).

(6) Appearance (Apparent Naturalness): Overall, the area displays natural characteristics when viewed from nearby Visual Priority Routes or Use Areas. Exceptions include the evidence of developed areas adjacent to the area on the west and east sides of Thorne Arm, as well as the evidence of developments within the area. Beach logging has occurred in the vicinity of the Sea Level Mine and northeast of Bruno Point on the east shore of Carroll Inlet.

(7) Surroundings (External Influences): Developed areas extend into the area's central and east peninsulas. This roadless area surrounds private inholdings associated with the Sea Level Mine on the east shore of upper Thorne Arm and another inholding about two miles north of Moth Bay. The remaining adjacent areas to this roadless area are either non-National Forest System lands, saltwater, or part of Misty Fiords National Monument. The parts of the roadless area bordered by saltwater are subject to the external influence of motorized boats. The sights and sounds of aircraft are apparent at most locations in the area due to the established flight paths of sight-seeing trips traveling to Misty Fiords National Monument.

(8) Attractions and Features of Special Interest: The main attraction of the South Revilla Roadless Area is fishing in the streams and lakes at the upper end of the Thorne Arm. One public recreation cabin, three trails, the

Sea Level Mine, and three mooring buoys are attractions also. The area contains 12 inventoried recreation places, which cover 17,550 acres, or 33 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of this roadless area changed in three main ways between 1989 and 2003. First, the 1989 area included a stretch of land along the east side of Carroll Inlet north of Gnat Cove. This land is no longer part of the roadless area. Second, the 1989 area included an area of land along the west side of Carroll Inlet north of California Head. This land is also no longer part of the roadless area. In both cases, these areas are separated from the 2003 area either by developed areas or non-National Forest System lands. In addition, a beach logged area (i.e., an area that was logged but not roaded) was the site of the Sea Level Mine and its associated community and industrial activity in the early 20th century that was excluded from the 1989 area is included as part of the 2003 area. Third, several smaller areas along developed boundaries have been excluded between the Draft and Final SEIS to improve manageability in those areas.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The South Revilla Roadless Area is mostly unmodified except for the cabins and trail systems in the Fish Creek and Icehouse Cove area and the relatively small areas where timber harvest has occurred in the past. Evidence of old mining activity exists, particularly the Sea Level Mine on Thorne Arm. The area is bordered by areas that have been developed, but the area still has high natural integrity and apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is moderate opportunity for solitude and high opportunity for primitive recreation within this area. There are, however, sights and sounds of aircraft almost anywhere within the area. In addition, the parts of the roadless area adjacent to saltwater are subject to the external influence of motorized boats.

Good opportunities for primitive recreation exist along the east shore of Thorne Arm and along potential trail corridors, such as Gokachin Creek, which lead into the Misty Fiords National Monument Wilderness. Three outfitter/guides served clients for a total of 56 recreation days in and around this roadless area in 2000. Freshwater fishing and transportation were the main outfitter/guide activities pursued in this area. Many of the area's recreation opportunities are in the Fish Creek area, and in the saltwater channels and coves of Carroll Inlet and Thorne Arm, which provide a semi-primitive setting. There is one Public Recreation Cabin (Fish Creek Cabin), a mooring buoy, and a hiking trail in the vicinity of Fish Creek. There is a second trail and mooring buoy in Icehouse Cove. A person camping or hiking in the Fish Creek area during the steelhead and salmon fishing seasons is likely to encounter other individuals.

The area primarily provides semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	11,159	21%
Semi-Primitive Non-Motorized (SPNM)	6,123	11%
Semi-Primitive Motorized (SPM)	30,756	57%
Roaded Motorized (RM)	5,489	10%

The area contains 12 inventoried recreation places, which cover 17,550 acres, or 33 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	5	8,780
SPNM	0	0
SPM	6	8,389
RM	3	381

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

A public recreation cabin is available around Alava Bay, in the Misty Fiords National Monument Wilderness Area just east of this area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the South Revilla Roadless Area was 21 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 20. The difference in ratings reflects changes in the size of the roadless area and the increase in activities that affect potential solitude. When rated separately, the California Head peninsula received a score of 19, the Black Mountain peninsula rated 20, and the eastern peninsula between Cone Point and Notch Mountain rated 22.

(4) Ecologic and Geologic Values: The South Revilla Roadless Area is located on the southwest quarter of Revilla Island. The area includes parts of three eastern peninsulas. It is not part of a larger roadless area but it is bordered to the east and part of the north by the Misty Fiords National Monument Wilderness.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed VCU 753 along Carroll Inlet as a primary salmon producer. VCUs in the area were not identified as primary sport fish producers (ADF&G, 1998).

Streams in this area support pink, chum, coho, and sockeye salmon, as well as cutthroat trout, rainbow/steelhead trout, and Dolly Varden char. The Anadromous Waters Catalogue (ADF&G, 2000) indicates that the two unnamed streams near California Head provide habitat for pink salmon. The peninsula between Carroll Inlet and Thorne Arm has a number of short Class I streams inhabited by coho, pink, and chum salmon, and steelhead trout.

Productive streams on the peninsula east of Thorne Arm include Fish Creek, Sea Level, Gokachin Creek, and the stream draining into Lucky Cove. Fishing is excellent in Fish Creek for coho, pink, and chum salmon, steelhead, and Dolly Varden char. Fish Creek is well known for its steelhead fishery, with an annual run of approximately 500 adult fish. Information from ADF&G (1998) indicates that Sea Level Creek had an annual average peak escapement of 1,400 pink salmon for the years 1992 through 2001. The stream draining into Lucky Cove provides several miles of anadromous fish habitat and has runs of coho, sockeye, pink, and chum salmon, as well as steelhead trout.

(b) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, wolves, marten, beaver, mink, loon, and common waterfowl. Based on data compiled from 1985 to 1994, VCU 753 along Carroll Inlet is listed among the top 25 percent of VCUs for black bear harvest (ADF&G, 1998). Trumpeter swans use the major saltwater inlets and freshwater lakes as resting areas during their migrations. Mountain goats and moose inhabit Revilla Island, but have not been reported here. Brown bears are not known to inhabit this area (MacDonald and Cook, 1999). Old-growth forests also provide habitat for, northern goshawk, and marbled murrelet.

The main migration or dispersal corridors in the area are most likely along major creeks such as Fish Creek, Gokachin, and Sea Level Creeks, and near the beach. Black bear, bald eagle, marten, Sitka black-tailed deer, and Vancouver Canada geese concentrate their activities in the beach fringe during some seasons.

Based on harvest data compiled from 1985 to 1995, two of the VCUs partially located in this area (VCUs 748 and 753) were ranked in the top 25 percent of black bear harvest areas on the Tongass by VCU (ADF&G, 1998). Another VCU entirely within the area (VCU 758) was ranked in the second 25 percent of black bear harvest areas on the Tongass by VCU.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, eight sensitive plant species are known or suspected to occur in the Ketchikan Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There is a swath of karst that partially enters this roadless area. The band begins at Brunn Point, running southeast and encountering the roadless area again in the hills southeast of Elf Point. This represents 1,046 acres or 2 percent of the roadless area. About 10 percent of the karst is mapped as high vulnerability karst. There are no glaciers or unique geologic features in this area.

(5) Scientific and Educational Values: There are no known special features within the area. There are no Research Natural Areas located in this area.

(6) Scenic Values: This roadless area is part of the Coastal Hills visual character type, which consists of moderately steep landforms, predominantly rounded summits, elevations to 4,500 feet, and flat-floored, U-shaped valleys. Numerous island groups are also common in this character type. The landscapes of this area range from very flat to gently rolling or moderately rugged. The highest elevations are just over 2,100 feet.

Overall, the area displays natural characteristics when viewed from nearby Visual Priority Routes or Use Areas. Exceptions include the evidence of timber harvest and road building adjacent to the area on the west and east sides of Thorne Arm, as well as the evidence of beach logging within the area. Beach logging has occurred in the vicinity of the Sea Level Mine and northeast of Bruno Point on the east shore of Carroll Inlet. Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Revillagigedo Channel (Alaska Marine Highway and Tour Ship Route); Carroll Inlet, Thorne Bay, George Inlet, and Moth Bay (Saltwater Use Areas); Fish Creek, including around the buoy (Public Recreation Cabin); and the Fish Creek-Low Lake and Gokachin Lake trails (Hiking Trails).

About 91 percent of the area was inventoried as Variety Class B (possessing landscape diversity that is common in the character type). Another 8 percent was rated as Variety Class C (possessing minimal landscape diversity relative to the character type). Although much of this area has low to very average scenic quality, there are some specific areas that are notable. These include the Fish Creek-Low Lake drainage at the head of Thorne Arm and the cluster of lakes near the summit of Black Mountain.

About 94 percent of the area is in a Type I Existing Visual Condition where the natural landscape has remained unaltered by human activity. The rest of the area is primarily Type IV (1 percent), in which changes to the landscape are easily noticed, or Type V (4 percent) where changes to the landscape are obvious.

(7) Social, Cultural, and Historical Values: Prehistoric and historic Alaska Native cultures used this roadless area. A number of prehistoric and historic sites have been identified through archeological surveys, oral histories and other historical records. Goldschmidt and Haas (1946) identified commercial fish traps along the Revillagigedo Channel shoreline in this area. In more recent history, homesteading occurred in Icehouse Cove and one site is still used as a summer residence. The Thorne Arm area has been prospected for minerals resulting in the

Sealevel Mine being patented. This was once occupied by a major community and industrial site, including a railroad. This mine has since been abandoned. In the 1950s, timber harvest was initiated and is continuing to progress into unroaded areas

Based on harvest data compiled from 1985 to 1995, two of the VCUs partially located in this area (VCUs 748 and 753) were ranked in the top 25 percent of black bear harvest areas on the Tongass by VCU (ADF&G, 1998). Another VCU entirely within the area (VCU 758) was ranked in the second 25 percent of black bear harvest areas on the Tongass by VCU.

Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that seven of the eight VCUs wholly or partially located within this area are subsistence use areas with a high sensitivity to disturbance. One of the VCUs partially in this area (VCU 753 along Carroll Inlet) was included among the highest value community use areas and none were listed in the second and third most important groups (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The boundaries of the South Revilla Roadless Area consist mostly of Misty Fiords National Monument Wilderness and saltwater, providing manageable roadless area boundaries in these areas. However, developed areas extend into the area's central and east peninsulas and the west peninsula is bordered by non-National Forest System lands. Ridgelines along the northern boundary could be used to separate the roadless from the developed areas. The area itself would be manageable as a roadless area.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: There is potential for additional recreation cabins and trails within the Thorne Arm part of this roadless area. One potential trail corridor would lead into the Gokachin Lakes area in Misty Fiords National Monument. This lake system has been recognized as an outstanding canoeing opportunity. The potential for primitive dispersed recreation in this area is good.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: There are no fish enhancement projects planned for this area.

(4) Wildlife Resources: There are no wildlife enhancement projects planned for this area.

(5) Timber Resources: There are 21,858 acres mapped as productive old growth and 286 acres mapped as second growth due to harvest in the roadless area. Of these acres, 10,884 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,598 acres or 3 percent of this roadless area are estimated to be suitable for timber production. Approximately 650 of the suitable acres are mapped as high-volume old growth; of these acres, 14 are mapped as high-volume, coarse-canopy old growth.

The Sea Level Timber Sale FEIS (USDA Forest Service, 1999) selected an alternative that made available approximately 51 million board feet (MMBF) of timber in multiple sales. A portion of the Madder Timber sale (25.9MMBF), and all of the Orion Timber Sale (12.2MMBF) which were cleared by the Sea Level FEIS and are currently under contract are within the South Revilla Roadless Area. Additional sales include: Mop Point, 91 Knot (NEPA cleared .7MMBF /sale in 2002), Southside Small sales (.5MMBF 2005), Saw Ridge (14MMBF in 2008), and Beaver (19MMBF in two sales in 2011).

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: Although no active mining is occurring at this time, there is interest in the mineral potential of the Black Mountain and Moth Bay areas. There are active claimants, however, doing hand prospecting. Information from the Sea Level Timber Sale FEIS (USDA Forest Service, 1999) indicates that there are historic mines located near the mouth of Sea Level Creek. The potential for location and development of locatable minerals in the area appears to be low but there may be minor deposits of copper and zinc (USDA Forest Service, 1999; USGS, 2001).

This area contains an estimated 5,385 acres of land identified as a mineral activity tract. Of this acreage, 4,462 are identified as having a high potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). In addition, this area contains an estimated 52,213 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991) that are considered to have very low potential for development.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area.

(9) Water Availability and Use: The Fish Creek Public Recreation Cabin is the only facility in the area that creates a demand for water. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: There are no areas of scientific interest in this area.

(11) Land Use Authorizations: There are no land authorizations in this area.

(12) Land Status: All of the land within this roadless area is part of the National Forest System. The area surrounds a few private inholdings including some associated with the Sea Level Mine on the east shore of upper Thorne Arm and one about two miles north of Moth Bay. Much of the western part of this roadless area is encumbered land, specifically around Carroll Inlet and Thorne Bay.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Sockeye salmon are harvested in the Thorne Arm area by local residents authorized for subsistence and personal use. Some trapping occurs within this roadless area. Sportfishing in the streams and lakes of the area is done primarily by local residents.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the South Revilla Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also proposed that the areas surrounding Fish and Gokachin Creeks be protected as Wild and Scenic Rivers. The adjacent areas that have been developed were identified as "roaded areas available for logging."

(c) Public Input During Forest Plan Revision and Appeals: This area was specifically addressed in public input received during the Forest Plan revision. Several representatives of Environmental Groups asked for the protection of natural values, especially roadless recreation in several areas including Carroll and George Inlets. Others felt that better road systems on Revilla Island would benefit Ketchikan residents by creating more recreation opportunities. A petition signed by over 700 Ketchikan residents recommended that existing recreation opportunities on lands near Ketchikan be increased by expanding the existing road system to connect with existing roads in George Inlet, Carroll Inlet, and Thorne Arm. A few other commenters opposed expansion of the road system. Timber industry representatives wanted timber harvest emphasized in certain areas or throughout the island.

The appeal filed by the City of Wrangell et al. protested the recommendation of Gokachin Creek as a wild river.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: Part of the South Revilla Roadless Area is located within the project area for the Sea Level FEIS Timber Sales (Buckdance, Orion, and Madder). A total of 15 public comments were received on the Sea Level Timber Sale Draft EIS (USDA Forest Service, 1999). Comments that pertained to the potential effects of road building included the following. Road building and logging will affect the Misty Fiords National Monument Wilderness. Road construction linking Ketchikan and Sea Level would increase access for hunters. The issue of the Bradfield Road Transportation link and additional road building should be addressed. The long-term effects of roads on wildlife need to be addressed in detail.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Department of Fish and Game rated the South Revilla roadless area as the fourth highest priority for protection in the Ketchikan Area (outside of POW Island). This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

SEACC recommended this area for LUD II designation. The Tongass Conservation Society recommended North and South Revilla roadless area for long-term protection from logging and development. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 523 for permanent protection as LUD II.

A number of cave/karst experts and other individuals stated both the North Revilla and South Revilla Roadless Areas contain significant karstlands. They indicated that significant karstlands, approximately 900 acres, are adjacent to heavily logged areas in North Revilla Roadless Area; the karstlands, together with karstlands in the adjacent roaded areas, should be protected.

(2) Nearby Roadless and Wilderness Areas and Uses: The Misty Fiords National Monument Wilderness borders the area to the east and part of the north. The South Prince of Wales Wilderness is located approximately 36 miles to the west. The Revilla Roadless Area (#524) is located directly west across George Inlet from the area. Other roadless areas in the general vicinity include North Revilla (#526) and Carroll (#535) to the north, Gravina (#522) to the west, and Duke (#521) to the south.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	230	260
Ketchikan (Pop. 14,070)	5	10
Wrangell (Pop.2,308)	80	110
Petersburg (Pop. 3,324)	115	140

(4) Relative Contribution to the National Wilderness Preservation System: The South Revilla Roadless Area is located on the southwest quarter of Revillagigedo Island (also known as Revilla Island). The area includes parts of three peninsulas and Bold Island, which is located south of the central peninsula. It also includes other smaller islands associated with the roadless area. Misty Fiords National Monument Wilderness borders the area to the east and part of the north. Non-National Forest System lands, saltwater, and timber harvest areas comprise the remainder of the north border. George Inlet borders the area to the west. The three peninsulas are separated by Thorne Arm and Carroll Inlet. Revillagigedo Channel borders the area to the south. The area is characterized by a combination of rugged and gentle terrain. The steep mountain slopes generally rise up to about 2,500 feet with the uppermost elevation being above timberline. Most of the gentle terrain is located at the head end of the Thorne Arm.

Most of the area is natural appearing, however it is influenced by developments on adjacent lands. The area has very high natural integrity and high apparent naturalness. The California Head peninsula has high natural integrity and apparent naturalness. The central peninsula with Black Mountain has very high natural integrity and high apparent naturalness. The eastern peninsula between Cone Point and Notch Mountain has outstanding natural integrity and very high apparent naturalness. The opportunity for solitude is marginal and the opportunity for primitive recreation is relatively high.

None of the area is considered distinctive for the character type from a scenery standpoint. The area has some localized karst. The roadless area has cultural and historic values. There are no other known special features in this area.

The roadless area includes about 8,841 acres of high-volume, old-growth forest. Of these acres, approximately 300 are mapped as high-volume, coarse-canopy old growth.

The South Revilla Roadless Area is classified as being in the Revilla Island/Cleveland Peninsula Biogeographic Province and makes up about 4 percent of the province. It is one of 12 inventoried roadless areas found within the province which make up about 60 percent of the province. Part of the Misty Fiords National Monument Wilderness is located in this province and makes up about 18 percent of the province. The province also includes two Congressionally designated LUD II areas (Naha and Anan) which make up about 5 percent of the province.

The South Revilla Roadless Area lies within two ecological sections; it represents 0.1 percent of the Inside Passage Fjordlands Ecological Section and 10 percent of the Dixon Entrance Lowlands Ecological Section. Both of these ecological sections are well represented by existing wilderness (20 and 56 percent, respectively) and by other existing non-development LUDs (32 and 28 percent, including 2 percent in LUD II within the Inside Passage Fjordlands Ecological Section).

The majority (80 percent) of the roadless area is in the Thorne Arm Granitics Ecological Subsection; this portion of the roadless area represents 68 percent of the ecological subsection within Tongass NF. Approximately 19 percent of this ecological subsection is protected in existing wilderness and 40 percent in other existing non-development LUDs. Thirteen percent of the roadless area is in the Princess Bay Volcanics Ecological Subsection; this portion of the roadless area represents 12 percent of the entire ecological subsection. Approximately 62 percent of this ecological subsection is protected in existing wilderness and 8 percent in other existing non-development LUDs. The balance (7 percent) of the roadless area is in the Traitors Cove Metasediments Ecological Subsection; this portion of the roadless area represents 1 percent of the entire ecological subsection, 10 percent of which is protected in existing LUD II and 26 percent in other existing non-development LUDs.

The South Revilla Roadless Area was rated 20 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 53rd from the highest (along with 16 other roadless areas) among the 109 Tongass inventoried roadless areas. When portions of the roadless area were rated separately, the California Head peninsula rated 19, the Black Mountain peninsula rated 20, and the eastern peninsula between Cone Point and Notch Mountain rated 22.

There is both local and national support for managing this area in an unroaded condition, but little support for designation of this area as wilderness. Designation would create a wilderness with some localized karst, some cultural and historic values, but no other areas of significance. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low for the area as a whole, or for one or more of the peninsulas.

V. Environmental Consequences

The South Revilla Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 57 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 43 percent of the roadless area. The land in the development LUDs includes an estimated 1,598 acres that are suitable for timber production (3 percent of the suitable acres on the Ketchikan/Misty Fiords Ranger District). Approximately 14 of the suitable acres are classified as high-volume, coarse-canopy old growth. A portion of the Madder Timber sale (25.9MMBF), and all of the Orion

Timber Sale (12.2MMBF) were cleared by the Sea Level FEIS and are currently under contract are within the South Revilla Roadless Area. Additional sales include: Mop Point, 91 Knot (NEPA cleared, 0.7MMBF/sale in 2002), Southside Small sales (0.5MMBF in 2005), Saw Ridge (14MMBF in 2008), and Beaver (19MMBF in two sales in 2011). This area contains an estimated 5,385 acres of land identified as a mineral activity tract. Of this acreage, 4,462 are identified as having a high potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains an estimated 52,213 acres of undiscovered locatable mineral resources that are considered to have very low potential for development. The timber sale, recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area could be affected by ongoing developments in the area allowed under the Forest Plan. The cultural, historic, and karst values are protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, special uses, and minerals programs would continue similar to current conditions. No timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the cultural, historic, and karst values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. No timber harvest would be allowed. The potential for other development, including recreational use, special uses, and mineral management would be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the cultural, historic, and karst values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 523 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								53,559
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	7,988	7,988	7,988	7,988	7,988		7,988	
Semi-remote Recreation	22,491	22,491	22,491	22,491	22,491		22,491	
Recommended LUD II						53,559		
LUD II								
Wild, Scenic, Recreational River	239	239	239	239	239		239	
Experimental Forest								
Scenic Viewshed	4,297	4,297	4,297	4,297	4,297		4,297	
Modified Landscape	2,045	2,045	2,045	2,045	2,045		2,045	
Timber production	16,499	16,499	16,499	16,499	16,499		16,499	
TOTAL	**53,559**	**53,559**	**53,559**	**53,559**	**53,559**	**53,559**	**53,559**	**53,559**
Suitable Timber Lands	1,598	1,598	1,598	1,598	1,598	0	1,598	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Revilla (524)

ACRES (NFS): 30,941

BIOGEOGRAPHIC PROVINCE: Revilla Island/Cleveland Peninsula

ECOLOGICAL SECTION: Inside Passage Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 17

I. Overview and Description

(1) Location and Access: The area is located on the southwest quarter of Revillagigedo Island (also known as Revilla Island). The cities of Ketchikan, with regularly scheduled air flights and on the Alaska Marine Highway, and Saxman border the area to the southwest. Non-National Forest System lands also border the area to the southeast and much of the north. Non-National Forest System lands generally separate the Revilla Roadless Area from the surrounding saltwater, with one exception in the northeast where the area is bordered by George Inlet. Areas developed for timber management border the area to the north and northwest. The area is surrounded by developments on all sides, the majority of which are on non-National Forest System lands. These roads provide access to the edge of this area. Several hiking trails lead into the area and allow relatively easy access by foot. Access may also be via boat or float plane on saltwater from George Inlet. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: This area has a rich history in the development of southern Southeast Alaska. The city of Ketchikan and its surroundings form the southern boundary of this roadless area. Consequently, much of the Revilla Roadless Area has been influenced in the past, and continues to be influenced, by human activity. The Ward Creek drainage was developed by the combination of early 1900s mining, Civilian Conservation Corps public works projects during the 1930s, and hydropower development further east in the Swan Lake area. In recent times, the State and Native corporations have made extensive land selections in the headwaters of Ward Creek, along George and Carroll Inlets, and along the south boundary of this roadless area. The State selections are for the express purpose of future community development. Prehistoric and historic Alaska Native cultures used this roadless area. A number of prehistoric and historic sites have been identified through archeological surveys, oral history, and historic records.

(3) Geography and Topography: The area is characterized by rugged terrain. Mountain slopes are steep, causing deeply incised drainages. Elevations rise to over 3,000 feet. There are about 4,929 acres of alpine and 706 acres of rock terrain in the area. The area also includes approximately 5 miles of saltwater shoreline and approximately 1,591 acres of lakes. The area contains two islands totaling 123 acres.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is part of the Revilla Island/Cleveland Peninsula Province. This province is characterized by a variable climate with wet conditions predominating on land nearest the outer coast, with much colder conditions near the mainland. Revilla Island has many exceptional estuaries and is influenced by human activities, none of them, however are in this roadless area.

Ecological Section/Subsection. The Revilla Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E). Within this area there are two ecological subsections (see table below). Except for a small portion in the northwest, the majority of the Revilla Roadless Area is composed of the Ketchikan Mafics/Ultramafics Ecological Subsection. The unique composition (low silica, high

calcium, iron, and magnesium content) and relative impermeability of mafic rock have produced a precipitous landscape. Peaks up to 3,000 feet elevation arise from the coast. Exceptional plant communities are found on mafic soils, but the steep topography and soil chemistry are not favorable to forests (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Inside Passage Fjordlands	Ketchikan Mafics/Ultramafics	98%
	Traitors Cove Metasediments	2%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock and are typically about 40 inches deep.

(c) Vegetation: This area is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with a large cedar component, however, much of this roadless area is non-forested. There are 4,929 acres of alpine vegetation mapped in the Revilla Roadless Area. Less than 100 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 22,127 acres mapped as forestland, of which 10,340 acres or 47 percent are mapped as productive old-growth forest. Of the productive old growth, 5,539 acres or 54 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,420 acres of high-volume, coarse-canopy old growth. There is 88 acres of second growth in this area.

(d) Fish Resources: There is very little anadromous fish habitat in this area; however, some major fish producing streams, such as the White River and Ward Creek, are fed by waters from this area. Species that can be found in these waters include pink, chum, coho, and sockeye salmon; steelhead and cutthroat trout; and Dolly Varden char.

(e) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, mountain goat, wolves, river otter, marten, mink, loon, bald eagle, trumpeter swans, Canada goose, and common waterfowl. Moose do not inhabit Revilla Island. Brown bears are not known to inhabit this area and are rarely found on Revilla Island (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This roadless area was allocated to six different Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These six LUDs are Timber Production, Scenic Viewshed, Semi-remote Recreation, Municipal Watershed, Special Interest Area (SIA), and Old-growth Habitat.

LUD	Acres
Timber Production	2,744
Scenic Viewshed	1,986
Semi-remote Recreation	9,273
Municipal Watershed	6,995
Special Interest Area	5,113
Old-growth Habitat	4,830

Approximately 15 percent of this roadless area was allocated to a development LUD (Timber Production, Scenic Viewshed). The Timber Production LUD was assigned to approximately 9 percent of the roadless area. Approximately 6 percent of the roadless area was allocated to the Scenic Viewshed LUD, primarily located northwest of Mahoney Lake.

Approximately 85 percent of the roadless area was allocated to a non-development LUD (Semi-remote Recreation, Municipal Watershed, Special Interest Area, Old-growth Habitat). Approximately 30 percent of the area was allocated to the Semi-remote Recreation LUD. In the Ketchikan Lakes area, approximately 23 percent of the roadless area was allocated to the Municipal Watershed LUD to serve the Ketchikan community. Approximately 17

percent of this roadless area was allocated to the Special Interest Area LUD. This SIA is known as the Ward Lake Recreation Area. The Old-growth Habitat LUD was assigned to approximately 16 percent of the roadless area.

There are three Forest Service campgrounds, several picnic areas, and a day use trail at Ward Lake, which borders the Revilla Roadless Area to the west, and restroom and day use site at Silvis Lake on the east side of the area. The Revilla Roadless Area includes a number of trails, the most prominent being the Deer Mountain Trail, which is designated as a National Recreation Trail. There are several new trails that are in various stages of construction within the area. The Dude Mt. Trail was completed in 2000, the Ward Creek Trail and Salvage Trail Extension was completed in 2002, the Minerva Mountain Trail (phase 1) is scheduled to be completed by 2003, The Achilles Mt. Trail is scheduled for 2004/2005, and there are two additional trails through private land where easements are being negotiated. This includes the Minerva Mt. Trail (Phase 2) and the Carlanna Lake Trail. These new trail projects join existing trails together and provide great opportunities to access alpine areas. The area also includes a Public Recreation Cabin (Deer Mountain Cabin). The Ward Lake drainage receives heavy summer recreation activity. Many locals use this area for hiking and camping. Some winter recreation opportunities exist. When snow conditions allow, people ice skate, snowmobile, snowboard and cross-country ski. Snowmobiling along the mountain ridges is becoming very popular. Parts of this roadless area are used by off-road vehicles during the winter for recreation and trapping. One outfitter/guide operated helicopter landing tours in this area in 2000, reporting a total of 1,205 service days. Some subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that two of the four VCUs partially located within this area are subsistence use areas with a high sensitivity to disturbance. Several Recreation Events (special running events, club events) take place within this area. There is one recreation residence on Jag Lake. There are several outfitter/guide operators who have proposed additional use on trails within this roadless area.

This roadless area is the source of Ketchikan's domestic water supply. The Beaver Falls hydropower plant is located outside the roadless area at George Inlet, the dam itself is located within the roadless area. Ketchikan Lakes has an existing dam, hydropower facility and road. Three hydroelectric power related facilities are proposed for this area at Connell Lake, Whitman Lake, and Upper Mahoney Lake. The Upper Mahoney Lake project has been licensed by the FERC. The Mahoney Lake license, P-11393, allows for the construction of ROW for electrical transmission line to connect the Mahoney project to the Beaver Falls project.

(6) Appearance (Apparent Naturalness): This area appears mostly natural, but does have evidence of human modification. These modifications include the recreation cabin, trail system, hydroelectric power facilities, recreation trails, and past mining activity. The area's close proximity to Ketchikan, its history of mineral exploration, its high recreation use, the external influences of roads and logging on adjacent lands, and other activities, all negatively affect the apparent naturalness of the area. However, the overall area displays natural characteristics when viewed from nearby Visual Priority Routes or Use Areas and forms a natural backdrop to Ketchikan. The cabin, trails, hydroelectric power facilities, and the community of Ketchikan and other developments in adjacent areas are visible from some locations in the area and affect the apparent naturalness of the area.

(7) Surroundings (External Influences): The entire southern boundary of this roadless area is influenced by the development associated with Ketchikan. There are also extensive over flights by fixed-wing aircraft and helicopters flying out of Ketchikan. State and private lands north of Ketchikan and along George Inlet form much of the boundary of this roadless area. These private lands are rapidly being developed.

(8) Attractions and Features of Special Interest: The main attraction of this area is its close proximity and accessibility to Ketchikan. It is the only National Forest System land area that is accessible by road from Ketchikan. The trail system is of interest because people can hike from Ketchikan to the alpine zone or take short day hikes at their leisure. Note, however, that the Ketchikan Lakes watershed is closed to public entry to protect the water supply.

This area includes part of the Ward Lake Recreation Area. This area includes all National Forest System lands that drain into the Ward Creek/Ward Lake watershed. This is a recreation Special Interest Area. Recreation use levels in the Ward Lake Area were estimated at 25,000 recreation visitor days at the time of the Forest Plan revision, with use expected to increase. This area contains 11 inventoried recreation places, which cover 19,832 acres, or 64 percent of

the roadless area. There are campgrounds and many hiking trails within this roadless area and plans to build several more.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of this roadless area changed significantly between 1989 and 2003. In 1989, the area included a large roadless area located northwest, across Ward Lake Road, from the 2003 Revilla Roadless Area. The 1989 area also included another large area of land located east of George Inlet, as well as a third area located east of Carroll Inlet. These second two areas were both clearly separated from the area that comprises the 2003 Revilla Roadless Area by waterways, non-National Forest System lands, and, in the case of the third area, an area of forest roads and associated developments. The extent of the change in this area between 1989 and 2003 is illustrated by the area's decrease in size from 161,263 acres in 1989 to 30,941 acres in 2003. The majority of the areas that were formerly part of the Revilla Roadless Area are now part of the North Revilla Roadless Area (#526).

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The cabin, trails, hydroelectric power facilities, and past mining activities within the area and the logging and urban development in adjacent areas are visible from some locations in the area and affect the apparent naturalness of the area. The area provides moderate natural integrity and high apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is moderate opportunity for solitude and primitive recreation within the area. All along the roadless area's southern edge, the noise of the Ketchikan area can be heard. There are extensive overflights by fixed-wing aircraft and helicopters flying out of Ketchikan.

The Revilla Roadless Area includes a number of trails, the most prominent being the Deer Mountain Trail, which is designated as a National Recreation Trail. The area also includes a Public Recreation Cabin (Deer Mountain Cabin). The Ward Lake Recreation Area, a Special Interest Area, receives heavy summer recreation activity and some winter recreation. It includes three campgrounds, several picnic areas, and several trails. Parts of this roadless area are used by snowmachines during the winter for recreation and trapping. One outfitter/guide operated helicopter landing tours in the area in 2000, reporting a total of 1,205 service days.

Due to the extensive human use of much of the area, the external influences of timber harvest on adjacent lands, the recreation cabin, existing trail system, hydroelectric power facilities, and other activities, the opportunities for primitive recreation are limited.

There are many recreation attractions in this area but most are in a semi-primitive setting. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	7,254	23%
Semi-Primitive Non-Motorized (SPNM)	17,664	57%
Semi-Primitive Motorized (SPM)	1,523	5%
Roaded Natural (RN)	2,153	7%
Roaded Motorized (RM)	1,909	6%
Rural (R)	429	1%

The area contains 11 inventoried recreation places, which cover 19,832 acres, or 64 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	1	7,254
SPNM	6	10,819
SPM	5	260
RN	2	959
RM	6	540
R	0	0

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Revilla Roadless Area was 21 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 17. This rating is reflective of the many ongoing activities and developments near and within the roadless area by residents and visitors of Ketchikan.

(4) Ecologic and Geologic Values: The Revilla Roadless Area is not part of a larger contiguous roadless area. The area is surrounded by roads on all sides, the majority of which are on non-National Forest System lands.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCU 748, along George Inlet and only partially in the area as a primary salmon and sportfish producer. All the other VCUs were listed as secondary salmon producers.

There is very little anadromous fish habitat in this area; however, some major fish producing streams, such as the White River and Ward Creek are fed by waters from this area. Species that can be found in these waters include pink, chum, coho, and sockeye salmon; steelhead and cutthroat trout; and Dolly Varden char.

The White River has an estimated annual peak escapement of 82,800 pink salmon, and good coho smolt production capability. Ward Creek and Lake support all salmon species except chinook. Rainbow, steelhead, cutthroat, and eastern brook trout and Dolly Varden char are also present. The river system has an annual steelhead run of approximately 200 adult fish (USDA Forest Service, 1997). ADF&G surveys between 1998 and 2001 indicate that average peak escapement for Ward Creek was 9,900 pink and 500 coho salmon. The ADF&G lists Ward Creek among the 19 "high quality" watersheds in Southeast Alaska for fisheries values. Herring Cove and Beaver Falls Creeks have fairly short stretches of anadromous fish habitat supporting coho, pink, and chum salmon.

(b) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, mountain goat, wolves, river otter, marten, mink, loon, bald eagle, Canada goose, and common waterfowl. Trumpeter swans use the major saltwater inlets and freshwater lakes as resting areas during their migration

Based on harvest data compiled from 1985 to 1995, one of the VCUs partially located in this area (VCU 748 along George Inlet) was ranked in the top 25 percent of black bear harvest areas on the Tongass (ADF&G, 1998).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, eight sensitive plant species are known or suspected to occur in the Ketchikan Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are 97 acres, or less than one percent, of low vulnerability karst or cave resources mapped in this roadless area. There are no glaciers or unique geologic features.

(5) Scientific and Educational Values: There are no known features of ecologic, geologic, scientific, or cultural significance. There are no Research Natural Areas in this roadless area. The area is adjacent to the cities of Ketchikan and Saxman and readily accessible to school-age children.

(6) Scenic Values: This roadless area is part of the Coastal Hills visual character type which is characterized by moderately steep landforms, predominantly rounded summits, elevations up to 4,500 feet, and flat-floored, U-shaped valleys. A variety of island groups are also common. The Revilla Roadless Area possesses some of the most rugged and diverse terrain in the character type.

Overall, the area displays natural characteristics when viewed from nearby Visual Priority Routes or Use Areas and forms a natural backdrop to Ketchikan. The cabin, trails, hydroelectric power facilities, and past mining activities within the area and the logging and urban development in adjacent areas are visible from some locations in the area and affect the apparent naturalness of the area. Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include: Tongass Narrows (Alaska Marine Highway); George Inlet and Tongass Narrows (Saltwater Use Areas); Deer Mountain Cabin (Public Recreation Cabin); Ketchikan (Community); the mountain ranges and alpine area between Ketchikan, Ward Lake-Harriet Hunt Lake Road, and George Inlet (Dispersed Recreation Areas); Connell Lake Hiking Trail, Ward Lake Nature Trail, Silvis Lake Hiking Trail, and Deer Mountain Hiking Trail (Hiking Trails); and the new Dude Mt. Trail, Ward Creek Trail and Salvage Trail Extension, Minerva Mountain Trail (phase 1), Achilles Mt. Trail and the proposed Minerva Mt. Trail (Phase 2), and the Carlanna Lake Trail.

About 69 percent of the roadless area was inventoried as Variety Class A and possesses a level of landscape diversity that is unique for the character type. These Class A landscapes are primarily centered around the rugged terrain behind Ketchikan from Deer Mountain north to the White River drainage and George Inlet. This area exhibits diverse alpine terrain, vegetative patterns, rock formations, and many lake basins and waterfalls. Approximately 31 percent was rated as Variety Class B and possesses landscape diversity common for the character type.

About 95 percent of this area is in a Type I Existing Visual Condition where the natural landscape has remained unaltered by human activity. The remaining 4 percent is split evenly between EVC II, where the area appears to be untouched by human activity and EVC III, where the average person noticed changes in the landscape.

(7) Social, Cultural, and Historical Values: This area has a rich history in the development of southern Southeast Alaska. The city of Ketchikan and its surroundings form the southern boundary of this roadless area. Consequently, much of the Revilla Roadless Area has been influenced in the past, and continues to be influenced, by human activity. The Ward Creek drainage was developed by the combination of early 1900s mining, Civilian Conservation Corps public works projects during the 1930s, and in support of hydropower development further east in the Swan Lake area. In recent times, the State and Native corporations have made extensive land selections in the headwaters of Ward Creek, along George and Carroll Inlets, and along the south boundary of this roadless area. The

State selections are for the express purpose of future community development. Prehistoric and historic Alaska Native cultures used the roadless area.

There are three Forest Service campgrounds, several picnic areas, and a day use trail at Ward Lake, which borders the Revilla Roadless Area to the west. The Revilla Roadless Area has a number of trails, the most prominent being the Deer Mountain Trail, which is designated as a National Recreation Trail. The area includes a Public Recreation Cabin (Deer Mountain Cabin). The Ward Lake drainage receives heavy winter recreation activity. Parts of this roadless area are used by snowmachines during the winter for recreation and trapping. One outfitter/guide operated helicopter landing tours in this area in 2000, reporting a total of 1,205 service days. Based on harvest data compiled from 1985 to 1995, one of the VCUs partially located in this area (VCU 748) was ranked in the top 25 percent of black bear harvest areas on the Tongass by VCU (ADF&G, 1998).

A small amount of subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment listed two of the four VCUs partially located within this area (748 and 752 along George Inlet) among the VCUs with the highest sensitivity to disturbance of subsistence use areas. However, none of the VCUs in this area were included among the VCUs with the highest, second, or third most important community use values (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The area is bordered to the southeast, southwest, and north (partially) by non-National Forest System lands. These boundaries are irregularly shaped and do not conform to natural topographic features. Given this and the area's proximity to Ketchikan, these boundaries would be difficult to define and manage. Parts of this roadless area are used by snowmachines during the winter for recreation and trapping. Prohibiting these uses would be very controversial. As would prohibiting current use by helicopter providers. Management as wilderness would be difficult.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: This roadless area has high potential for development of trails and other recreation opportunities which can accommodate the high number of potential users associated with Ketchikan.

This area includes part of Ward Lake Special Interest Area. This area includes all National Forest System lands that drain into the Ward Creek/Ward Lake watershed. This is a recreation Special Interest Area. Recreation use levels in the Ward Lake Area were estimated at 25,000 recreation visitor days at the time of the Forest Plan revision, with use expected to increase.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: There is some potential for fish habitat improvement on streams within the area. However, the best opportunities are now within adjacent State- and private lands. There is a desire by ADF&G to improve access to and the quality of freshwater fishing in this roadless area. Information from the Tongass Land Management Plan Revision EIS (USDA Forest Service, 1997) indicates that there are several existing and planned fisheries enhancement projects for the Ward Creek and Lake system, which borders the Revilla Roadless Area to the west. These projects include placement of large woody debris and an on-going stocking program by ADF&G.

(4) Wildlife Resources: There are no wildlife enhancement projects planned for this area.

(5) Timber Resources: There are 10,340 acres mapped as productive old growth and 88 acres mapped as second growth due to harvest in the roadless area. Of these acres, 4,381 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 585 acres or 2 percent of this roadless area are estimated to be suitable for timber production. Approximately 233 of the suitable acres are mapped as high-volume old growth; of these acres, 20 are mapped as high-volume, coarse-canopy old growth.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: There are mining claims located on Mahoney Mountain, though the area has low potential for mineral extraction. The USGS estimates that the undiscovered mineral resource potential in this area might be less than $4,000 per acre.

This area contains 3,212 acres of land identified as a mineral activity tract having low potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). In addition, this area contains an estimated 30,941 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); these acres are considered to have low and very low potential for development.

(8) Transportation and Utilities: There are transportation and utility projects proposed for this area. Mahoney Lakes hydro facility would have a powerline along the coast from Mahoney Lake to Beaver Falls. The Mahoney Lakes Hydro Project FERC #P11393, has been licensed and would use and occupy 114 acres of this area.

Whitman Lakes Hydro Project is being pursued by Ketchikan Public Utilities at this time, FERC #11841. This project does not propose building roads on NFS lands.

(9) Water Availability and Use: Approximately 23 percent of the area was allocated to the Municipal Watershed LUD to service Ketchikan. The existing Ketchikan Lakes and Beaver Falls hydropower plants are located within this roadless area. There are also three new hydropower facilities proposed for this roadless area. These facilities are proposed for Connell Lake, Whitman Lake, and Upper Mahoney Lake.

(10) Areas of Scientific Interest: There are no areas of scientific interest in this roadless area.

(11) Land Use Authorizations: Special Use Permits include hydropower related permits at Ketchikan Lakes and Silvis Lakes, a permit for about 750 feet of private road to Cape Fox Corporation near Mahoney Lake. Mahoney Lakes hydro project has obtained FERC licenses and will construct on approximately 114 acres of NFS Land (85.6 acres for occupancy and 28.4 acres for transmission ROW).

(12) Land Status: All land within the roadless area is part of the National Forest System. The area is, however, bordered to the southeast, southwest, and north (partially) by non-National Forest System lands. These boundaries are irregularly shaped and do not conform to natural topographic features. Most of the roadless area in the north and east are encumbered.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives significant local use for recreation.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Revilla Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also proposed that the road corridor leading to the Silvis Lakes be designated a restoration area. This corridor extends into but is not part of the Revilla Roadless Area.

(c) Public Input During Forest Plan Revision and Appeals: This area was specifically addressed in public input received during the Forest Plan revision. Several commenters (including the Tongass Conservation Society) asked for the protection of natural values, especially roadless recreation in several areas including George Inlet. Others felt that better road systems on Revilla Island would benefit Ketchikan residents by creating more recreation opportunities. A petition signed by over 700 Ketchikan residents recommended that existing recreation opportunities on lands near Ketchikan be increased by expanding the existing road system to connect with existing roads in George Inlet, Carroll Inlet, and Thorne

Arm. A few other commenters opposed expansion of the road system. Timber industry representatives wanted timber harvest emphasized in certain areas or throughout the island.

The appeal filed by Susan Walsh states that the Forest Service has failed to consider the cumulative impacts resulting from clearcutting on private and public lands in the Ketchikan area. Ketchikan relies heavily on tourism and fishing along with timber as an economic base. "Continued harvest will likely discourage tourists from visiting this area."

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: Part of the Revilla Roadless Area was in the project area for the Shelter Cove Final EIS (USDA Forest Service, 1991). The Proposed Action identified in this document did not include harvest in the Revilla Roadless Area. Comments on this EIS supported roaded recreation in the Shelter Cove project area and a tie-through road from Ketchikan to North Revilla Island.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended this area for LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 524 for permanent protection as LUD II.

Some individuals recommended the area between Moser Bay and Naha for protection.

(2) Nearby Roadless and Wilderness Areas and Uses: The Misty Fiords National Monument Wilderness is located approximately 13 miles east of the Revilla Roadless Area. The South Prince of Wales Wilderness is located approximately 30 miles to the west.

The North Revilla Roadless Area (#526) is located north and west of the area. The two areas are separated by Ward Lake Road and a relatively narrow area of timber harvest units at their closest point. The South Revilla Roadless Area (#523) and the Carroll Roadless Area (#535) are located directly east across George Inlet from the area. The Gravina Roadless Area (#522) is located to the west.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	225	245
Ketchikan (Pop. 14,070)	0	10
Wrangell (Pop.2,308)	75	100
Petersburg (Pop. 3,324)	110	125

(4) Relative Contribution to the National Wilderness Preservation System: The Revilla Roadless Area is located on the southwest quarter of Revillagigedo Island (also known as Revilla Island). The cities of Ketchikan and Saxman border the area to the southwest. Non-National Forest System lands also border the area to the southeast and much of the north. Non-National Forest System lands generally separate the Revilla Roadless Area from the surrounding saltwater, with one exception in the northeast where the area is bordered by George Inlet. Areas developed for timber management border the area to the north and northwest. The area is surrounded by developments on all sides, the majority of which are on non-National Forest System lands. The Revilla Roadless Area is characterized by rugged terrain. Mountain slopes are steep, causing deeply incised drainages. Elevations rise to over 3,000 feet.

The area itself is mostly unmodified and natural appearing. However, it is heavily influenced by ongoing developments and activities on all sides. The roadless area has moderate natural integrity and high apparent naturalness. The opportunity for solitude and primitive recreation is moderate.

The Revilla Roadless Area has moderate to high scenic quality; approximately 69 percent of the landscape is considered distinctive from a scenery perspective. The area has rich historic values, and includes the Ward Lake Special Interest Area, which emphasizes recreational uses.

The roadless area includes about 5,539 acres of high-volume, old-growth forest. Of these acres, approximately 1,420 are mapped as high-volume, coarse-canopy old growth.

The Revilla Roadless Area is classified as being in the Revilla Island/Cleveland Peninsula Biogeographic Province and makes up about 2 percent of the province. It is one of 12 inventoried roadless areas found within the province which make up about 60 percent of the province. Part of the Misty Fiords National Monument Wilderness is located in this province and makes up about 18 percent of the province. The province also includes two Congressionally designated LUD II areas (Naha and Anan) which make up about 5 percent of the province.

The Revilla Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents 2 percent of the ecological section. Approximately 20 percent of the Inside Passage Fjordlands Ecological Section is in existing wilderness, 2 percent is in existing LUD II, and 30 percent is protected by other existing non-development LUDs.

The vast majority (98 percent) of the roadless area is in the Ketchikan Mafics/Ultramafics Ecological Subsection; this portion represents 62 percent of the entire ecological subsection, none of which is in existing wilderness or LUD II, but 46 percent is protected by other existing non-development LUDs. The remaining 2 percent of the roadless area is in the Traitors Cove Metasediments Ecological Subsection; this portion represents 0.2 percent of the entire ecological subsection, 10 percent of which is protected in existing LUD II and 26 percent in other existing non-development LUDs.

The Revilla Roadless Area was rated 17 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 93rd from the highest (along with four other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing this area in an unroaded condition, but little support for designation of this area as wilderness. Designation would create a wilderness with very high public use including the Ward Lake Special Interest Area. Nearly all the larger lakes in the roadless area are used for hydroelectric or municipal water. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low.

V. Environmental Consequences

The Revilla Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 85 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 15 percent of the roadless area. The land in the development LUDs includes an estimated 585 acres that are suitable for timber production (1 percent of the suitable acres on the Ketchikan/Misty Fiords Ranger District). Approximately 20 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains approximately 3,212 acres of land identified as a mineral activity tract having low potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains an estimated 30,941 acres of undiscovered locatable mineral resources; these acres are considered to have low and very low potential for development. The recreation, minerals, and special use programs would continue. Timber harvest planning in the area would continue. The values associated with the natural settings of the roadless area are mostly protected by the Forest Plan. The exception is the ongoing developments in the northeastern portion of the roadless area that are allowed by the Forest Plan. The historic and scenic values are protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, special uses, and minerals programs would continue similar to current conditions. No timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the historic and scenic values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. No timber harvest would be allowed. The ongoing recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the historic and scenic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 524 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								30,941
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area	5,113	5,113	5,113	5,113	5,113		5,113	
Remote Recreation								
Enacted Municipal Watershed	6,995	6,995	6,995	6,995	6,995		6,995	
Old-growth Habitat	4,830	4,830	4,830	4,830	4,830		4,830	
Semi-remote Recreation	9,273	9,273	9,273	9,273	9,273		9,273	
Recommended LUD II						30,941		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	1,986	1,986	1,986	1,986	1,986		1,986	
Modified Landscape								
Timber production	2,744	2,744	2,744	2,744	2,744		2,744	
TOTAL	**30,941**	**30,941**	**30,941**	**30,941**	**30,941**	**30,941**	**30,941**	**30,941**
Suitable Timber Lands	585	585	585	585	585	0	585	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Behm Islands (525)

ACRES (NFS): 4,944

BIOGEOGRAPHIC PROVINCE: Revilla Island/Cleveland Peninsula

ECOLOGICAL SECTION: Inside Passage Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 14

I. Overview and Description

(1) Location and Access: This area consists of a chain of small islands located along the southwest corner of Revillagigedo Island (also known as Revilla Island). The area includes Betton, Grant, Back, Stack, and Moser Islands. These islands are bordered to the southeast by Clover Passage. Behm Canal borders the area to the northwest. The area is 10 miles northwest of Ketchikan, which has regularly scheduled air flights and is on the Alaska Marine Highway. Access is by boat from the several marinas in the area. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: The Behm Islands Roadless Area includes a chain of small islands extending from Point Higgins to Naha Bay. These islands form the sheltered water known as Clover Pass and have been used for fox farms, navigational aid sites, and for a recreation residence located on Betton Island. A number of prehistoric and historic sites have been identified through archeological survey, oral history and historical documents. There are remnants of structures on Betton and Stack Islands. Some beach logging has occurred on Betton Island. A Special Use Authorization was issued to the U.S. Navy (Navy) to use the Back Island site in 1998 as part of the acoustic test range located in Behm Canal. The facility is currently in operation and occupies about 15 acres. The facility has a dock at saltwater and a road that accesses the main building facility.

(3) Geography and Topography: The area is characterized by several low relief islands and rocky shorelines with interspersed sand beaches. There are 32 miles of saltwater shoreline. There are approximately 8 acres of rock and no mapped acres of alpine. The area consists of 40 islands (11 of which are greater than 10 acres) totaling 4,944. All the islands are forested.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is part of the Revilla Island/Cleveland Peninsula Province. This province is characterized by a variable climate with wet conditions predominating on land nearest the outer coast, with much colder conditions near the mainland.

Ecological Section/Subsection. The Behm Islands Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E). This area is represented by one ecological subsection (see table below). The Traitors Cove Metasediments Ecological Subsection is composed mostly of glacially carved sedimentary rock. Steep slopes give way to deeply incised valleys. Landslides are a common occurrence. Productive hemlock and Sitka spruce forests grow on well-drained soils on slopes. Forested wetlands are found in poorly drained soils along the valley floors (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Inside Passage Fjordlands	Traitors Cove Metasediments	100%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock and are typically about 40 inches deep.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with large components of cedar. There are interspersed areas of the muskeg, however due to their small size and association with forested sites, accurate acreage estimates are difficult and none have been mapped.

There are approximately 4,891 acres mapped as forest land, of which 3,263 acres or 67 percent are mapped as productive old-growth forest. Of the productive old growth, 1,208 acres or 37 percent are mapped as high-volume old-growth forest. The productive old growth includes about 148 acres of high-volume, coarse-canopy old growth. The area also includes 397 acres of second growth where beach timber harvest has occurred in the past.

(d) Fish Resources: Two unnamed streams on Betton Island provide habitat for pink and coho salmon.

(e) Wildlife Resources: There are few land mammals on these islands. According to MacDonald and Cook (1999), black bear, Sitka black-tailed deer, beaver, mink, and river otter inhabit Betton Island. Marine mammals are occasionally seen on or near rocks along the shoreline.

(5) Management Direction and Current Uses: This roadless area was allocated to one Land Use Designation (LUD) in the 1997 Tongass Land and Resource Management Plan. The non-development LUD assigned to the entire area is Semi-remote Recreation.

LUD	Acres
Semi-remote Recreation	4,944

There is one recreation residence authorized by a special use permit on Betton Island. There are U.S. Coast Guard navigation aids installed on several of the islands. A Special Use Authorization was issued to the Navy to use the Back Island site in 1998 as part of the acoustic test range located in Behm Canal. The facility is currently in operation and occupies about 15 acres. The facility has a dock at saltwater and a road that accesses the main building facility.

Recreation use in this area primarily includes hiking, commercial and sport fishing, nature viewing tours, sea kayaking, and beachcombing. Two outfitter/guides operated in the area in 2000 taking visitors on remote setting nature tours and reporting a combined total of 12,807 service days. One boardwalk trail is located on the west side of Betton Island and is associated with the outfitter and guide use of this area.

(6) Appearance (Apparent Naturalness): This area has an overall natural appearance, with the exception of the recreation cabin and boardwalk trail on Betton Island and a 15 acre Navy site on Back Island. Timber harvest has occurred in a number of locations on Betton Island, as well as along the east shore of Hump Island and parts of Grant and Joe Islands. Overall, the area displays natural characteristics when viewed from nearby Visual Priority Routes or Use Areas. This natural appearance can also be experienced within most parts of the area, with the exception of Back Island.

(7) Surroundings (External Influences): The islands are located 1 to 2 miles from the recreation, resort, and residential area on Revillagigedo Island. The Clover Pass area has been designated a Scenic Recreation Area by the Ketchikan Borough. Many homes, marinas, and resort developments can be seen on the shore of Revilla Island from many portions of this area. Timber harvest and associated developments on State and private lands on the slopes east of Clover Pass has recently become visible from portions of the waterways and islands. The entire area is exposed to the constant sights and sounds of powerboats during the summer. The State of Alaska has selected the southern portion of Grant Island and Joe Islands.

(8) Attractions and Features of Special Interest: The Clover Pass area receives heavy fishing pressure and people fishing do land on the sandy beaches to rest, relax, and beachcomb. This is one of the most popular areas in

Ketchikan for beachcombing and dispersed camping. The natural appearance, nearness to Ketchikan, and shelter provided by these islands contribute to the attraction to those who live here, and is also related to why tour groups are able to successfully use the area. There are good wildlife viewing opportunities within this area as well. The area contains four inventoried recreation places, which cover 3,976 acres, or 80 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of this roadless area did not change significantly between 1989 and 2003.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: Most of the area is physically relatively unaltered. The recreation summer home on Betton Island has little influence on the apparent natural integrity of the area. The Navy's acoustical test site on Back Island affects the natural integrity of Back Island and breaks the apparent naturalness of this island and the northeastern end of Betton Island. Evidence of past logging is apparent on Betton, Joe, Hump, and Grant Islands. However, overall, with the small size of the roadless area and the small size of the islands that make up the roadless area, the ongoing development and high level of uses significantly affect the suitability for wilderness classification based on their natural appearance. Overall the area has moderate natural integrity and apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is low opportunity for solitude and primitive recreation within this roadless area. The entire area is within sight and sound of saltwater, and the north end of the community of Ketchikan. During the summer-long principal fishing season, both sport and commercial, there are the constant sights and sounds of powerboats. The frequent landings by boaters further decrease the opportunity for solitude. Two outfitter/guides operated in the area in 2000 taking visitors on remote setting nature tours and reporting a combined total of 12,807 service days.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Motorized (SPM)	3,432	69%
Roaded Natural (RN)	1,462	30%
Roaded Modified (RM)	42	1%

The area contains four inventoried recreation places, which cover 3,976 acres, or 80 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPM	3	2,471
RN	1	1,462
RM	1	42

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

The Settlers Cove State Recreation Site is adjacent to this roadless area, across Clover Passage.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one

VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Behm Islands Roadless Area was 19 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 14. This rating better reflects the developments and operations associated with Back Island Naval facility, trail development, lodge on private land on Grant Island, and the very high current use of the area.

(4) Ecologic and Geologic Values: The Behm Islands roadless area is not a part of a larger contiguous roadless area.

(a) Fish Resources: The one VCU in this roadless area is not listed as a primary sport fish or salmon producer (ADF&G, 1998). Two unnamed streams on Betton Island provide habitat for pink and coho salmon.

(b) Wildlife Resources:
There are few land mammals on these islands. According to MacDonald and Cook (1999), black bear, Sitka black-tailed deer, beaver, mink, and river otter inhabit Betton Island. Marine mammals are occasionally seen on or near rocks along the shoreline.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, eight sensitive plant species are known or suspected to occur in the Ketchikan Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are no glaciers or unique geologic features in this area.

(5) Scientific and Educational Values: There are no known features of ecologic, geologic, scientific, or cultural significance. There are no Research Natural Areas in this roadless area. The area is 15 miles northwest of Ketchikan and accessible to school-age children.

(6) Scenic Values: This roadless area is part of the Coastal Hills visual character type, which is characterized by moderately steep landforms, with generally rounded summits usually less than 4,000 feet, and also by island groups of different sizes and forms. This roadless area is typical of these island groups and is adjacent to other Coastal Hill landforms on Revilla Island.

This area has an overall natural appearance, with the exception of the recreation cabin on Betton Island and a Navy site on Back Island. Timber harvest has occurred in a number of locations on Betton Island, as well as along the east shore of Hump Island and parts of Grant and Joe Islands. Overall, the area displays natural characteristics when viewed from nearby Visual Priority Routes or Use Areas. This natural appearance can also be experienced within the area, except on Back Island and portions of Betton Island near the recreation residence and the boardwalk trail. Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include: Grant Island (State Marine Park); Tongass Highway (State Highway #7) (Public Use Road); and Clover Passage, Moser Bay, and Naha Bay (Saltwater Use Areas).

Approximately 98 percent of the area was inventoried as Variety Class B and has common or average scenic diversity relative to its character type. Although there are no highly distinctive scenic features, the combination of

waterways, islands of different sizes, and the backdrop of more massive landforms around this popular fishing and boating area make this a very attractive landscape. Approximately 2 percent of the area was not inventoried for Variety Class type.

The Existing Visual Condition of this area was inventoried as 80 percent Type I, indicating a landscape essentially unmodified by human activity and 18 percent EVC Type III, in which the average person notices changes in the landscape, but the changes do not attract significant attention. Approximately 2 percent of the area was not inventoried for EVC.

(7) Social, Cultural, and Historical Values: The Behm Islands Roadless Area includes a chain of islands extending from Point Higgins to Naha Bay. These islands form the sheltered water known as Clover Pass and have been used for fox farms, navigational aid sites, and for a recreation residence located on Betton Island. In 1988, the Navy proposed to use Back Island as the shore facility for their new acoustic test range located in Behm Canal. A Special Use Authorization was issued to the Navy to use the Back Island site in 1998. The facility is currently in operation and occupies about 15 acres. The facility has a dock at saltwater and a short road that accesses the main building facility.

Prehistoric and historic Alaska Native cultures used this roadless area. Goldschmidt and Haas (1946) identified a commercial fish trap on Betton Island. A number of prehistoric and historic sites have been identified through archeological survey, oral history and historical documents.

Recreation use in this area primarily includes hiking, commercial and sport fishing, nature viewing tours, sea kayaking, and beachcombing. Two outfitter/guides operated in the area in 2000 taking visitors on remote setting nature tours and reporting a combined total of 12,807 service days. One boardwalk trail is located on the west side of Betton Island and is associated with the outfitter and guide use of this area.

The sole VCU in this area is not listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas. It is also not listed among the VCUs in the highest, second or third most important groups of community use values (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: Since the area is made up of small islands with limited potential for resource management activities, it could easily be managed in a roadless condition. Management as wilderness would be difficult because of the degree of development of adjacent areas.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: This roadless area has a major potential for recreation development and use. There is opportunity to provide unimproved or semi-improved rest/campsites for people kayaking or boating in the area. The Behm Canal Island group provides a scenic experience and backdrop for the significant amount of charter and independent fishing that occurs in the Clover Pass area. The area will continue to receive dispersed recreation use associated with the beaches. As exhibited by the successful boat and boardwalk tours, this is a very popular area to recreate because of the closeness to town, protected waterway providing safe access, and scenic and recreational qualities. This type of use is expected to continue and likely will increase. There is a sportfishing lodge located on the private land on Grant Island.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: There are no fisheries enhancement projects planned for this area.

(4) Wildlife Resources: There are no wildlife enhancement projects planned for this area.

(5) Timber Resources: There are 3,263 acres mapped as productive old growth and 397 acres mapped as second growth in the roadless area. Of these acres, 2,842 acres are categorized as tentatively suitable for timber

production. Based on the Forest Plan LUDs assigned to this area, none of this roadless area is classified as suitable for timber production.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: There are no mining claims or potential for mineral development within this roadless area. This area contains an estimated 941 acres of undiscovered locatable mineral resources that are considered to have very low potential for development (Brew et al., 1990; USDA Forest Service, 1991).

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area. A Potential Power Transmission Corridor runs just west of the roadless area, from Revilla Island to the Cleveland Peninsula.

(9) Water Availability and Use: The recreation residence on Betton Island and the Navy acoustical test site on Back Island are the only facilities to create the water demand in this roadless area. There are no existing or planned hydroelectric or domestic water projects within this roadless area.

(10) Areas of Scientific Interest: There are no areas of scientific interest in this roadless area.

(11) Land Use Authorizations: There is a permitted recreation residence and an electronics site on Betton Island. Two outfitter/guides operated in the area in 2000 taking visitors on remote setting nature tours and reporting a combined total of 12,807 service days. This activity is expected to continue. The Navy has constructed buildings and a boat dock on Back Island as part of their SEAFAC facility. In addition, there are several sites reserved by the Coast Guard for placing navigation aids.

(12) Land Status: All land within the roadless area is part of the National Forest System. The State of Alaska has selected land on Betton, Grant, and Joe Islands, outside of the roadless area.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives significant use by the local users/residents, as well as, visitors to the area. Many of the visitors using the area are from cruise ships that call in Ketchikan.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Behm Islands Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition.

(c) Public Input During Forest Plan Revision and Appeals: The Behm Islands Roadless Area was generally referred to in public input during the Forest Plan revision. One commenter requested that roadless recreation values along Behm Canal be protected for tourism use, hunting, fishing, and scenery.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless area have been identified.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended this area for LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 525 for permanent protection as LUD II.

Some individuals called for long-term protection of this area.

(2) Nearby Roadless and Wilderness Areas and Uses: The Misty Fiords National Monument Wilderness is located approximately 25 miles east of the Behm Islands Roadless Area. The South Prince of Wales Wilderness is located approximately 35 miles to the southwest.

This roadless area is separated from the North Revilla Roadless Area (#526) by Clover Pass and a strip of State and Borough land on Revilla Island. Other roadless areas in the general vicinity include Cleveland (#528), located northwest across Behm Canal, and Gravina (#522), located to the south.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	215	235
Ketchikan (Pop. 14,070)	10	15
Wrangell (Pop.2,308)	70	90
Petersburg (Pop. 3,324)	100	115

(4) Relative Contribution to the National Wilderness Preservation System: The Behm Islands Roadless Area consists of a chain of small islands located along the southwest corner of Revillagigedo Island (also known as Revilla Island). The area includes Betton, Grant, Back, Stack, and Moser Islands. These islands are bordered to the southeast by Clover Passage. Behm Canal borders the area to the northwest. The area is characterized by several low relief islands and rocky shorelines with interspersed sand beaches.

The Behm Roadless Area is natural appearing except near Back Island which has a Naval test station facility located on it. The area has moderate natural integrity and apparent naturalness. The opportunity for solitude and primitive recreation is low.

None of the landscape is considered distinctive for the character type from a scenery standpoint. The area provides the backdrop for fishing, boating and interpretive activities as part of the recreation and tourism activities near Ketchikan. The area does not have other features of significance.

The roadless area includes about 1,208 acres of high-volume, old-growth forest. Of these acres, approximately 148 are mapped as high-volume, coarse-canopy old growth.

The Behm Islands Roadless Area is classified as being in the Revilla Island/Cleveland Peninsula Biogeographic Province and makes up less than 1 percent of the province. It is one of 12 inventoried roadless areas found within the province which make up about 60 percent of the province. Part of the Misty Fiords National Monument Wilderness is located in this province and makes up about 18 percent of the province. The province also includes two Congressionally designated LUD II areas (Naha and Anan) which make up about 5 percent of the province.

The Behm Islands Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents 0.2 percent of the ecological section. Approximately 20 percent of the Inside Passage Fjordlands Ecological Section is in existing wilderness, 2 percent is in existing LUD II, and 30 percent is protected by other existing non-development LUDs.

This roadless area is contained entirely within the Traitors Cove Metasediments Ecological Subsection. This portion represents 2 percent of the entire ecological subsection, which is represented by 10 percent in existing LUD II and 26 percent in other existing non-development LUDs.

The Behm Islands Roadless Area was rated 14 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 107th from the highest (along with 2 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for managing this area in an unroaded condition, but little support for designation of this area as wilderness. Designation would create a very small wilderness with very high public uses. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be very low.

V. Environmental Consequences

The Behm Islands Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. All of the roadless area would be managed under non-development LUDs. The recreation and special use programs would continue. The values associated with the natural settings of the roadless area are protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Because the area is already allocated to non-development LUDs, this conversion would have little effect on existing or future uses. The ongoing recreation and special use programs would continue similar to current conditions. The values associated with the natural settings of the roadless area would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. The ongoing recreational use and special uses could be restricted. The values associated with the natural settings of the roadless area would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 525 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								4,944
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat								
Semi-remote Recreation	4,944	4,944	4,944	4,944	4,944		4,944	
Recommended LUD II						4,944		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production								
TOTAL	**4,944**	**4,944**	**4,944**	**4,944**	**4,944**	**4,944**	**4,944**	**4,944**
Suitable Timber Lands	0	0	0	0	0	0	0	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: North Revilla (526)

ACRES (NFS): 225,444

BIOGEOGRAPHIC PROVINCE: Revilla Island/Cleveland Peninsula

ECOLOGICAL SECTION: Inside Passage Fjordlands and Dixon Entrance Lowlands

2003 WILDERNESS ATTRIBUTE RATING: 20 (18, 19, 21, 22, 23)

I. Overview and Description

(1) Location and Access: This area, is located on the west coast of Revillagigedo (Revilla) Island, is bordered to the east by Misty Fiords National Monument Wilderness. Behm Canal borders the area to the north. The area is generally bordered to the west by saltwater and areas of timber harvest and associated roads. The west shoreline of the area has been developed from Naha Bay north to Gedney Pass, with roads and harvest units extending along drainages into the North Revilla Roadless Area. The southwest part of the area is bordered to the west by the North Tongass Highway. Road building and timber harvest has also occurred on both sides of Carroll Inlet, which extends into the area. Non-National Forest System lands, forest roads, and timber harvest units border the area to the south. Ketchikan with regularly scheduled air flights and on the Alaska Marine Highway, is located approximately 5 miles south of the southern lobe of the area.

Access to the area is via saltwater, floatplane, or by foot. The North Tongass Highway and a number of forest roads provide access to the edge of the area. There are also a number of trails providing access to the area. These include the Naha River, Wolf Lake, and Margaret Creek Trails, and the trail to Orchard Lake. There are no places suitable for landing wheeled airplanes inside the roadless area.

(2) History: This area has a rich history. Prehistoric and historic Alaska Native cultures used this roadless area. Their activities mostly centered in the Naha Bay area and probably extended into the interior in the Naha drainage. The Naha River has been an important subsistence use area through recent history. A number of prehistoric and historic sites have been identified through archeological surveys, oral histories, and other historical records.

The commercial fishing industry established itself at Loring, which is located on Naha Bay. This site has been continually occupied since the early 1900s. The Naha drainage was open to homesteading and the Orton Ranch owes its origin to this. A fish hatchery was constructed at Heckman Lake in the early 1900s.

The city of Ketchikan is located approximately 5 miles south of the southern lobe of this roadless area; however, the rural part of Ketchikan north of town basically defines the boundary all the way to Naha Bay and Loring. Consequently, the southern part of the Revilla Roadless Area has been influenced in the past, and continues to be influenced, by human activity. The Ward Creek drainage was developed by the combination of early 1900s mining, Civilian Conservation Corps public works projects during the 1930's, and hydropower related facility development. In recent times, the State and Native Corporations have received extensive land selections in the headwaters of Ward Creek, along George and Carroll Inlets, and along the south boundary of this roadless area. Much of this land has been developed for timber production. Areas developed for timber management in the northern part of the roadless area define much of the boundary in those areas.

(3) Geography and Topography: The area is characterized by rugged terrain. Mountain slopes are steep, causing deeply incised drainages. The central portion of the North Revilla area is dominated by an extensive lake chain associated with the Naha River and its tributaries. Elevation ranges from sea level to over 4,000 feet. The

area includes 12,663 acres of alpine, 5,034 acres of rock, 55 miles of shoreline on saltwater, and four islands totaling 301 acres of islands. Freshwater lakes cover 3,528 acres.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is located within the Revilla Island/Cleveland Peninsula Province. This province is characterized by a variable climate with wet conditions predominating on land nearest the outer coast, with much colder conditions near the mainland. Revilla Island has many exceptional estuaries and is influenced by human activities.

Ecological Section/Subsection. The North Revilla River Roadless Area is covered by two ecological sections: the Inside Passage Fjordlands (M247E) and Dixon Entrance Lowlands (M247J) Ecological Sections. These area are represented by four ecological subsection within the roadless area (see table below). Covering the western portion of the North Revilla Roadless Area, the Traitors Cove Metasediments Ecological Subsection is the dominant subsection within the roadless area. Steep slopes of glacially carved sedimentary rock give way to deeply incised valleys. Landslides are a common occurrence. Productive hemlock and Sitka spruce forests grow on well-drained soils on slopes. Forested wetlands are found in poorly drained soils along the valley floors. The eastern portion of the North Revilla Roadless Area is within the Behm Canal Complex Ecological Subsection. Glaciers left sheer, lake-filled valleys in the sedimentary and volcanic bedrock found in the south portion of the subsection, while the granitic geology to the north remains as high peaks (up to 4,000 feet elevation), rocks, and cliffs. Plant communities include large riparian wetlands and extensive alpine areas. The Bell Island Granitics Ecological Subsection, found in the northern portion of the North Revilla Roadless Area, is characterized by rounded hills and narrow, glacially scoured valleys. Within this subsection, mountain slope soils are usually well-drained, mineral soil, while lowlands, lake margins and wetlands are typically poorly drained soils (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Inside Passage Fjordlands	Traitors Cove Metasediments	56%
	Behm Canal Complex	30%
	Bell Island Granitics	14%
Dixon Entrance Lowlands	Princess Bay Volcanics	<1%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock and are typically about 40 inches deep.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with moderate components of cedar. Approximately 721 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 194,609 acres mapped as forestland, of which 102,033 acres or 52 percent are mapped as productive old-growth forest. Of the productive old growth, 64,804 acres or 64 percent are mapped as high-volume old-growth forest. The productive old growth includes about 10,835 acres of high-volume, coarse-canopy old growth. The area also includes 2,235 acres of second growth where beach timber harvest, mostly beach logging, has occurred in the past.

(d) Fish Resources: The streams and rivers in this area provide habitat for coho, pink, chum, and sockeye salmon, cutthroat and steelhead trout, and Dolly Varden char. Major fish producing streams include the Naha River, Beaver Creek, Carroll Creek, and Wolf Creek. Traitors, Margaret and Mirror Creeks are also located in this area.

(e) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, loon, and common waterfowl. Marbled murrelets and northern goshawks have been

found along major drainages. Trumpeter swans use some of the major saltwater inlets and freshwater lakes as resting areas during their migrations. Bald eagles and Canada geese nest in the area. There have been occasional reports of brown bear on Revilla Island, but a population has not established (USDA Forest Service, 1997). A population of mountain goats exists near Mount Reid.

(5) Management Direction and Current Uses: This roadless area was allocated to 13 Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These 13 LUDs are Timber Production, Modified Landscape, Scenic Viewshed, Transportation and Utility System (TUS), Semi-remote Recreation, Old-growth Habitat, Remote Recreation, LUD II, LUDII/Wild and Scenic River, Recreational River, Wild River, Scenic River, and Special Interest Area. The TUS LUD is a secondary LUD that overlays the other land uses.

LUD	Acres
Timber Production	61,704
Modified Landscape	14,991
Scenic Viewshed	11,830
Transportation and Utility System (TUS)	NA
Semi-remote Recreation	38,285
Old-growth Habitat	31,364
Remote Recreation	24,664
LUD II (including LUDII/Wild and Scenic River)	31,316
Recreational River	5,361
Wild River	3,320
Scenic River	1,336
Special Interest Area	1,272

Approximately 39 percent of this area (not including the TUS LUD overlay) was allocated to a LUD that allows timber harvest or road construction (Timber Production, Modified Landscape, and Scenic Viewshed). Approximately 27 percent of the roadless area was allocated to the Timber Production LUD. Approximately 7 percent of the roadless area was allocated to the Modified Landscape LUD. The Scenic Viewshed LUD was assigned to approximately 5 percent of the roadless area. This area also includes a potential road corridor and a potential power transmission corridor assigned to the Transportation and Utility System LUD. The Swan Lake-Lake Tyee Intertie powerline has been authorized and permitted for construction, and traverses from Carroll Inlet north to Behm Canal. Clearing for construction began in 2002.

Most of this roadless area, approximately 61 percent, was allocated to non-development LUDs (Semi-remote Recreation, Old-growth Habitat, Remote Recreation, LUD II, LUDII/Wild River, Recreational River, Wild River, Scenic River, Special Interest Area). The Semi-remote Recreation LUD was assigned to approximately 17 percent of the roadless area, primarily in the Falls Creek, Orchard Creek, Naha Bay, and Behm Narrows areas. Approximately 14 percent of the roadless area was allocated to the Old-growth Habitat LUD, and is part of the Forest-wide wildlife conservation strategy. Approximately 11 percent of the area was allocated to the Remote Recreation LUD. Most of the Naha Creek watershed was assigned to the LUD II designation. LUD II accounts for approximately 14 percent of the roadless area; this includes areas designated as LUD II/Wild and Scenic River, where both LUDs apply. These joint areas are directly adjacent to Naha River and the associated lakes.

Approximately 2 percent of the roadless area was allocated to the Recreational River LUD, located around Orchard Creek and Lake. Approximately 1 percent was assigned to the Wild River LUD and less than 1 percent was assigned to the Scenic River LUD. Less than 1 percent of the roadless area was also assigned to the Special Interest Area LUD.

The North Revilla Roadless Area includes five recreation use cabins located on Jordan, Heckman, Patching, and Orchard Lakes, and two Civilian Conservation Corps (CCC) era shelters on Wolf Lake, and Long Lake. Trails providing access to the area include the Naha River Trail (a designated National Recreation Trail), the Wolf Lake Trail, the Margaret Creek Trail, and the trail to Orchard Lake. One flight seeing tour outfitter/guide operated in the area for 75 service-days in 2000. There is also one wildlife observation area located at Margaret Lake near the

roadless area. This area has become very popular for bear viewing and the outfitter/guide use has increased substantially. There are two mooring buoys and one dock providing moorage at three of our trailheads.

Some subsistence use occurs in parts of the area The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that four of the VCUs located within this area are subsistence use areas with a high sensitivity to disturbance.

The Swan Lake Hydroelectric Project is located within the boundaries of this area. An existing electric transmission line that runs southwest from this facility borders the North Revilla Roadless Area. A planned power transmission corridor runs north through the area. The Forest Service has approved a Special Use Permit for Ketchikan Public Utilities to construct the Swan Lake-Lake Tyee Intertie Project, a 138-kV electric transmission line that would run through this corridor. Project clearing started in 2002. A potential road corridor also runs north through the area. Interest has been expressed in building a road that would provide access from Ketchikan to the northern portion of the island and beyond. This road was not included in the March 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999).

Timber harvest activity occurred in the Gedney Pass, Neets Creek, and Traitors River areas during the 1970s, 1980's and 1990's. These harvested areas border the area to the northwest. The Upper Carroll Timber Sale FEIS (USDA Forest Service, 1996) resulted in the sale of 30MMBF in 1998. The sale area extends into the North Revilla Roadless Area. Approximately 83 percent of the volume of this sale is within a roadless area. Four potential timber sales in this area are identified in the Forest Service's 10-Year Action Plan that would be at least partially in this roadless area. These are the Rockfish, Klu, Lookout, and Stocked timbers sales and are scheduled for 2005, 2006, 2008, and 2009 for a total of about 26 MMBF.

(6) Appearance (Apparent Naturalness): Overall, the land within this roadless area appears to be in a natural condition. Exceptions include the Swan Lake Hydroelectric Facility, Orton Ranch, and the trails and public recreation cabins located in the area. These modifications have a low impact on the overall natural appearance of the area. However, the developed areas on adjacent lands, as well as the proximity of the Tongass Highway to part of the area, affect the perceived naturalness of parts of this area. This is especially the case in the numerous places where these developments extend along drainages into the area. Viewed from nearby travel routes, the area provides a natural backdrop to the developed areas in the foreground.

(7) Surroundings (External Influences): Misty Fiords National Monument Wilderness borders the area to the east. Behm Canal borders the area to the north. Saltwater and developed areas border the area to the west. In addition, the Tongass Highway borders the southwest portion of the area to the west. Non-National Forest System lands, primarily developed for timber management border the area to the south. A sizeable parcel of State land is in Neets Bay and a small Native Corporation parcel on the northwest side of Naha Bay is adjacent to the roadless area. The roadless area surrounds a few parcels of private property, including the Loring town site, the Orton Ranch, and the Heckman Lake fish hatchery. There is a private cabin built on the old Heckman Lake fish hatchery site.

External influences on the area include motorized boat traffic, activities in adjacent developed areas, motor vehicles traveling the Tongass Highway, and aircraft flying overhead. Frequent floatplane landings bring people to and from the five public recreation cabins in the area.

(8) Attractions and Features of Special Interest: The main attraction of this area is the excellent sportfishing, including steelhead fishing and beauty of the Naha River. The recreation use cabins are very popular. The close proximity of the Naha River system to Ketchikan makes this a very popular day-use area for people living in Ketchikan. The area contains 40 inventoried recreation places, which cover 89,443 acres, or 40 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of the North Revilla Roadless Area changed in four main ways between 1989 and 2003. First, the 2003 area includes land on the peninsula that borders Gedney Pass to the south. This area was the Neets Roadless Area (#527) in 1989. Second, land east of Carroll Inlet that was part of the Revilla Roadless Area (#524) in 1990 is included in the 2003 area. Third, the 2003 area includes land south and southwest of the Naha LUD II area. This land was also formerly part of the Revilla Roadless Area (#524). Developments, primarily in the George Inlet area have divided #524. Fourth,

several smaller areas along developed boundaries have been excluded between the Draft and Final SEIS to improve manageability in those areas.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: Overall, the land within this roadless area has high natural integrity and moderate apparent naturalness. Developments include the Swan Lake Hydroelectric Facility and the trails and public recreation cabins located in the area. These modifications have a low impact on the overall natural appearance of the area. However, the developments that have occurred on adjacent lands, as well as the proximity of the Tongass Highway to part of the area, affect natural integrity in those areas and the apparent naturalness of parts of this area. This is especially the case in the numerous places where developed areas extend along drainages into the roadless area.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is high opportunity for solitude and very high opportunities for primitive recreation within the area. A person visiting the Naha River drainage is, however, likely to encounter several other people. The youth groups staying at the Orton Ranch often recreate in this roadless area. Frequent floatplane landings bring people to and from the five public recreation cabins in the area. The other drainages within this roadless area offer more solitude with little chance of seeing other individuals.

The five recreation use cabins include those located on Jordan, Heckman, Patching, and Orchard Lakes, and two CCC era shelters on Wolf Lake, and Long Lake. Trails that provide access to the area include the Naha River Trail (a designated National Recreation Trail), the Wolf Lake Trail, the Margaret Creek Trail, and the trail to Orchard Lake. One flight seeing tour outfitter/guide operated in the area for 75 service days in 2000. There is also one wildlife observation area located at Margaret Lake. This area has become very popular for bear viewing and outfitter/guide use has increased substantially. There are two mooring buoys and one dock providing moorage at three of our trailheads.

There are good opportunities for primitive or near-primitive recreation experiences due to the many recreation and scenic attractions and the remoteness of these attractions. Most of the area offers primitive opportunities except portions of the Naha River area where periodic contacts with other parties or individuals may detract somewhat from this primitive experience.

The area provides primarily primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	113,105	50%
Semi-Primitive Non-Motorized (SPNM)	70,725	31%
Semi-Primitive Motorized (SPM)	4,327	2%
Roaded Natural (RN)	6,159	3%
Roaded Modified (RM)	30,575	14%
Rural (R)	550	0%

The area contains 40 inventoried recreation places, which cover 89,443 acres, or 40 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	11	58,473
SPNM	8	13,966
SPM	5	2,945
RN	6	5,982
RM	15	7,920
R	2	157

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

The Misty-Fiords National Monument Wilderness Area, just east of the roadless area, also contains many recreation attractions.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the North Revilla Roadless Area was 22 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 20. The lower rating reflects ongoing developments. It should also be noted that this roadless area, which increased from approximately 164,810 acres in 1989 to 232,038 acres in 2003, now includes areas that were formerly parts of the Revilla (#524) and Neets (#527) Roadless Areas. Because of the large size of the roadless area and the degree of fragmentation created by ongoing developments on adjacent lands, five areas were rated separately. The area southwest of the Naha LUD II rated 19. The Naha LUD II rated 22. The Orchard Lake drainage rated 23. The peninsula located on the very north of the roadless area rated 21. The relatively small peninsula located near Gedney Pass rated 18.

(4) Ecologic and Geologic Values: The North Revilla roadless area is part of a larger unroaded land area. This larger area includes the Misty Fiords National Monument Wilderness, which borders the area to the east.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed four VCUs that start along the northern border close to Behm Canal and reach toward George Inlet (VCUs 733, 738, 742, and 748) as primary sportfish producers. There are five VCUs that also start along Behm Canal and Neets Bay and reach down to George Inlet (VCUs 739, 742, 744, 748, and 753) listed as primary salmon producers (ADF&G, 1998).

The streams and rivers in this area provide habitat for, coho, pink, chum, and sockeye salmon; cutthroat and steelhead trout; and Dolly Varden char. Major fish producing streams include the Naha River, Beaver Creek, Carroll Creek, and Wolf Creek (ADF&G, 2000). Traitors, Margaret, and Mirror Creeks are also located in the area.

The Naha River is well known for its excellent sport fisheries and recreation value, providing excellent trout and coho sport fishing. The river is a major producer of all commercial species of Pacific salmon except for chinook. The area is especially well known for its spring and fall steelhead fishing, with an annual run of approximately 500 adult fish. Grayling are found in the lakes of the upper Naha. ADF&G lists this system as one of 19 "high quality" watersheds in Southeast Alaska for fisheries values. The river has six miles of anadromous habitat. The estimated annual peak escapement is 62,000 pink salmon (USDA Forest Service, 1997). Information from ADF&G escapement surveys indicates that between 1992 and 2001, the Naha River had average peak escapements of 1,000 coho, 97,000 pink, and 4,000 sockeye salmon.

Carroll Creek has approximately 2.5 miles of anadromous fish habitat. It supports runs of pink, coho, and chum salmon, resident Dolly Varden, and rainbow, steelhead, and cutthroat trout.

Traitors Creek, which receives peak escapements of 99,400 pink salmon (ADF&G, 1998), also provides habitat for chum and Coho salmon, Dolly Varden, and steelhead trout (North Revilla FEIS, USDA Forest Service, 1993). Portions of Orchard Creek are also within this roadless area. Cutthroat and Dolly Varden

fishing is excellent in this creek, with unofficial reports of a near record trout caught at the stream inlet. Kokanee salmon are also present in the system. ADF&G lists this system as one of the 19 "high quality" watersheds in Southeast Alaska for fisheries values.

(b) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, loon, and common waterfowl. Marbled murrelets have been found along Carroll Creek and Orchard Creek. Northern goshawks have been found near Traitors Creek, Carroll Creek, and Orchard Lake (USDA Forest Service, 1996; 1997). Trumpeter swans use the major saltwater inlets and freshwater lakes as resting areas during their migrations. Bald eagles nest in the area. Nesting Canada geese have been observed on the Carroll Creek estuary (USDA Forest Service, 1996). Based on tracking from 1985 and 1994, three VCUs that surround George Inlet and Carroll Inlet (VCUs 746, 478, and 753) are in the top 25 percent of black bear harvest. Two VCUs closer to Behm Canal (739 and 744) were listed in the second 25 percent (ADF&G, 1998). There have been occasional reports of brown bear on Revilla Island, but a population has not established (USDA Forest Service, 1997). Mountain goats have been introduced to Revilla Island over the past 17 years. A substantial population now exists near Mount Reid. The population ranges from the ridge above Swan Lake north to the ridge above Orchard Lake. A few goats may range as far south as the head of Calamity Creek (Upper Carroll Timber Sale FEIS, USDA Forest Service, 1996).

The main wildlife dispersal corridors throughout Revilla Island are thought to be the Orchard Creek and Carroll Creek drainages. The Traitors Creek drainage is connected to this corridor through a pass in the northeast portion of the Traitors Creek drainage (USDA Forest Service, 1993). Connectivity to the Naha River drainage is along saltwater. The Carroll Creek estuary is an important wintering area for Canada geese, trumpeter swans, and other waterfowl (USDA Forest Service, 1996).

Based on harvest data compiled from 1985 to 1995, two VCUs located in this area (VCUs 739 and 744) were ranked in the second 25 percent of black bear harvest areas on the Tongass by VCU (ADF&G, 1998).

(c) Threatened, Endangered, and Sensitive Species. The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. Goshawks have been found near Traitors Creek, Carroll Creek, and Orchard Lake and nesting has occurred in the roadless area (USDA Forest Service, 1996; 1997). In addition, eight sensitive plant species are known or suspected to occur in the Ketchikan Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There is a swath of mid- to high-vulnerability karst resources that overlaps with this roadless area in two small areas near Painted Peak, Marble and Licking Creek. This represents 750 acres of mostly low vulnerability karst, and less than one percent, of the roadless area. There are no glaciers or unique geologic features.

(5) Scientific and Educational Values: There are no Research Natural Areas in the North Revilla Roadless Area. Ketchikan, located less than 5 miles south of the area, is the closest community with school-age children.

(6) Scenic Values: The North Revilla Roadless Area is part of the Coastal Hills visual character type which is characterized by moderately steep landforms, predominantly rounded summits, elevations up to 4,500 feet, and flat-floored, U-shaped valleys. Much of the North Revilla Roadless Area's landscape is quite typical of this character type. The more rugged, diverse terrain is at the northern end in the Orchard and upper Carroll Creek valleys. The Naha River drainage at the southern end exhibits more subdued landscapes. The northeast portion of the area

consists of a number of east-west drainages that originate from the ridgeline forming the western boundary of Misty Fiords National Monument.

Overall, the land within this roadless area appears to be in a natural condition. Exceptions include the Swan Lake Hydroelectric Facility and the trails and public recreation cabins located in the area. These modifications have a low impact on the overall natural appearance of the area. However, the developments that have occurred on adjacent lands, as well as the proximity of the Tongass Highway to part of the area, affects the areas near them and the apparent naturalness of parts of this area. This is especially the case in the numerous places where developments extend along drainages into the area. Viewed from nearby travel routes, the area provides a natural backdrop to the developed areas in the foreground.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include Naha River and Orchard Creek and Lake (Recommended Wild, Scenic and Recreational Rivers); Clover Passage, Naha Bay, Behm Narrows, Moser Bay, Gedney Passage, Hassler Pass, Traitors Cove, and Carroll Inlet (Saltwater Use Areas); Jordan Lake, Heckman Lake, and Orchard Lake (Public Recreation Cabins); Naha River and Wolf Lake trails (Hiking Trails).

About 10 percent of the area is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type). Approximately 90 percent was rated as Variety Class B (possessing characteristics common in the character type). The class A landscapes are found in the Orchard Creek drainage. The main valley possesses steep, rock-faced walls, with distinct vegetative diversity, while the main channel of this creek also contains many diverse landscape features.

About 84 percent of the area is in a Type I Existing Visual Condition (EVC) where the natural landscape has remained unaltered by human activity. The rest of the area is in an EVC III (2 percent, IV (6 percent), or V (8 percent), where the landscape has been moderately to heavily altered by past logging activity. These latter areas are primarily located around the headwaters of Neets Creek and Traitors Creek.

(7) Social, Cultural, and Historical Values: This area has a rich history. Prehistoric and historic Native cultures used this roadless area. A number of prehistoric and historic sites have been identified through archeological surveys, oral histories and other historical records. Their activities mostly centered in the Naha Bay area and probably extended into the interior in the Naha drainage. The Naha River has been an important subsistence use area through recent history, but has limited subsistence use today.

The commercial fishing industry established itself at Loring, which is located on Naha Bay. This site has been continually occupied since the early 1900s. The Naha drainage was open to homesteading and the Orton Ranch owes its origin to this. A fish hatchery was constructed at Heckman Lake in the early 1900s.

The city of Ketchikan and its surroundings are located approximately 2 miles south of this roadless area. Consequently, the southern part of the Revilla Roadless Area has been influenced in the past, and continues to be influenced, by human activity. The Ward Creek drainage was developed by the combination of early 1900s mining, CCC public works projects during the 1930s, and hydropower development in the Swan Lake area. In recent times, the State and Native corporations have made extensive land selections in the headwaters of Ward Creek, along George and Carroll Inlets, and along the south boundary of this roadless area.

Subsistence use occurs in parts of the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that seven of the VCUs covering land between Behm Canal and George and Carroll Inlets (VCUs 735, 736, 737, 744, 746, 748, and 753) are subsistence use areas with a high sensitivity to disturbance. VCU 753 is listed among the VCUs with the highest community use values, One of the VCUs (VCU 747) was included in the second most important group and one (VCU 739) was included in the third most important group for community use values (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The North Revilla Roadless Area is irregularly shaped, with a number of boundaries that do not follow natural topographic features. This is especially the case for the southwest portion of the area, which is bordered by non-National Forest System lands. Manageability of the area as wilderness is also affected by the adjacent areas where road building and timber harvest

has occurred. Roads and harvest units extend along a number of drainages into the North Revilla Roadless Area, affecting the perceived naturalness of the area, as well as its boundaries. The parts of the north portion of the area that adjoin the Misty Fiords National Monument Wilderness might have higher manageability as wilderness. Other parts of the area would be more difficult to manage in a wilderness or roadless condition. The portion south of Gedney Pass is small and separated from the main part of the roadless area. This area is not very manageable for wilderness, nor does it have high wilderness attributes. The area southwest of the Naha drainage and LUD II is nearly completely bordered by the developed lands of Ketchikan and State and private landowners. Management of this area as wilderness would be very difficult. The small area between the Swan Lake power facility and developed areas to the south along Carroll Inlet are not suitable for management as wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: This roadless area will continue to receive significant recreation use. It has potential, and a probable need, for additional trails. In 1996, the Alaska Visitor Association (AVA) proposed the following recreation developments in the North Revilla Roadless Area: a day-use wildlife observatory for 25 persons/day in the Naha area; and paths/trails/day boat dock for 6-20 persons/day, flight-seeing landings for 10-50 persons/day, and day-use recreation for 10 persons/day in the Long Lake area.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: There is some potential for fish habitat improvement on streams within the area. Information from the North Revilla FEIS indicates that potential fish rehabilitation projects have been identified in Traitors Creek and Orchard Lake (USDA Forest Service, 1993). There is a fish pass on Margaret Creek that has been recently improved to increase fish access.

(4) Wildlife Resources: No wildlife enhancement projects are planned for this roadless area. There is a wildlife observation site at the Margaret Creek fish pass.

(5) Timber Resources: There are 102,033 acres mapped as productive old growth and 2,235 mapped as second growth in the roadless area. Of these acres, 40,082 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 10,274 acres or 5 percent of this roadless area are estimated to be suitable for timber production. Approximately 5,596 of the suitable acres are mapped as high-volume old growth; of these acres, 1,212 are mapped as high-volume, coarse-canopy old growth.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: There are no mining claims located within this roadless area and the potential for mineral development is considered to be low. This area contains an estimated 44,368 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991) that are considered to have very low potential for development.

(8) Transportation and Utilities: A power transmission corridor runs north through this area. The Forest Service has approved a Special Use Permit for Ketchikan Public Utilities to construct the Swan Lake-Lake Tyee Intertie Project, a 138-kV electric transmission line that would run through this corridor. Project construction clearing began in 2002. A potential road corridor also runs north through the area. Interest has been expressed in building a road that would provide access from Ketchikan to the northern portion of the island. This road was not included in the March 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999). However, the route is included in Southeast Conference for consideration of long-term transportation needs for Southeast Alaska.

(9) Water Availability and Use: The Swan Lake Hydroelectric Project is located in this area. There are no existing or planned water projects within the roadless area and no additional hydroelectric water projects are planned.

(10) Areas of Scientific Interest: There are no areas of scientific interest in this area.

(11) Land Use Authorizations: The Forest Service has issued a Special Use Authorization for the Swan Lake Power line that extends to Ketchikan. The Forest Service has also issued a Special Use Authorization for the construction of the Swan Lake-Tyee Intertie. Clearing of the Intertie right-of-way began in late summer of 2002.

(12) Land Status: All land within the roadless area is part of the National Forest System. Land within this roadless area has encumbrances, primarily located near Ketchikan.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives significant local use for recreation activity.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. One of these areas, the Naha River Wilderness, is part of the North Revilla Roadless Area. This area was assigned permanent LUD II status under the 1990 Tongass Timber Reform Act. In 2001, HR 2908 identified the rest of the area as a proposed LUD II addition. The proposal also identified the Naha River lake system, Carroll Creek, and Orchard Creek for protection as Wild and Scenic Rivers.

(c) Public Input During Forest Plan Revision and Appeals: This area was specifically addressed in public input received during the Forest Plan revision. Several commenters asked for the protection of natural values, especially roadless recreation in several areas including Orchard Lake and Carroll Inlet. Others felt that better road systems on Revilla Island would benefit Ketchikan residents by creating more recreation opportunities. A petition signed by over 700 Ketchikan residents recommended that existing recreation opportunities on lands near Ketchikan be increased by expanding the existing road system to connect with the roads at Margarita Bay, Traitors Cove, Neets Bay, and Shrimp Bay on the north and the existing roads connecting with those in George Inlet, Carroll Inlet, and Thorne Arm. A few other commenters opposed expansion of the road system. Timber industry representatives wanted timber harvest emphasized in certain areas or throughout the island. Another commenter requested that VCU 732 be managed as Modified Landscape to allow for utility corridor, road, and roaded recreation development.

The town of Loring stated that logging within their watershed was not acceptable. They also stated that Indian Point and east is important for subsistence and should have no logging or road building. Orchard Lake was mentioned by a number of commenters requesting that the area be protected for its wildlife, subsistence, and recreation values. Carroll River Flats was mentioned for protection of its wildlife, subsistence, and recreation values. Another conservation group requested that the proposed road corridor that passes through the Naha LUD II area be relocated. Another commenter requested that the roadless recreation, tourism, hunting, fishing, and scenic resources of the Behm Canal area be protected.

The AVA proposed the following recreation developments in the North Revilla Roadless Area: a day-use wildlife observatory for 25 persons/day in the Naha area; and paths/trails/day boat dock for 6-20 persons/day, flight-seeing landings for 10-50 persons/day, and day-use recreation for 10 persons/day in the Long Lake area.

Parts of the area were also specifically identified in the Forest Plan appeal filed by the Sitka Conservation Society (SCS). The SCS identified Roosevelt Lagoon and Traitors Cove Lagoon as salt chuck areas, which they define as “intertidal bodies of water, typically separated from saltwater by a narrow rocky pass.” They noted that these areas are rare in Southeast Alaska and requested that salt chuck areas be assigned special

status to protect their biological resources, with no logging allowed. The appeal filed by Susan Walsh requested that the status of Orchard Creek for Wild and Scenic River designation be reviewed.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: The North Revilla Roadless Area was included in the project area of three recent project-level EISs:

- North Revilla FEIS (USDA Forest Service, 1993)
- Upper Carroll Timber Sale FEIS (USDA Forest Service, 1996)
- Swan Lake-Lake Tyee Intertie FEIS (USDA Forest Service, 1996)

Public comments that were received on these EISs and addressed road-related issues included the following:

North Revilla—No roadless issues listed.

Upper Carroll—Development of this area would create more roaded recreation, which the people of this area want. Roads would adversely affect fish and the Neets Bay hatchery. Road connections to Ketchikan, Shelter Cove, Shrimp Bay, and Fire Cove would be a great benefit to the community.

Swan Lake—The Ketchikan Indian Corporation opposed roads in the Carroll Inlet area because of their potential effect on fisheries and land animals. Roads in this area would also encourage members of the public to compete with native communities for subsistence resources. Others requested that the Orchard Lake area be kept as natural as possible. There should be no roads west of Bluff Lake because of the adverse effects on the Neets Bay hatchery's water supply. The City of Ketchikan, the Ketchikan Public Utility, and others supported access roads.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Department of Fish and Game rated the North Revilla roadless area (VCU 743) as the second highest priority for protection in the Ketchikan Area (outside of POW Island). This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

SEACC recommended this area for LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 526 for permanent protection as LUD II. The Tongass Conservation Society recommended North and South Revilla roadless area for long-term protection from logging and development.

A number of cave/karst experts and other individuals stated both the North Revilla and South Revilla Roadless Areas contain significant karstlands. They indicated that significant karstlands, approximately 1,100 acres, bracket a logged and roaded area in South Revilla Roadless Area; the karstlands, together with karstlands in the adjacent roaded areas, should be protected.

Some individuals called for long-term protection of this area. At least one individual recommended the area between Moser Bay and Naha for protection.

(2) Nearby Roadless and Wilderness Areas and Uses: The North Revilla roadless area is part of a larger unroaded land area. This larger area includes the Misty Fiords National Monument Wilderness. The Revilla (#524) and South Revilla (#523) Roadless Areas are located south of the area. The Behm Islands Roadless Area (#525) is located west. The North Cleveland Roadless Area is located north across Behm Narrows from the area.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	200	255
Ketchikan (Pop. 14,070)	5	40
Wrangell (Pop.2,308)	50	115
Petersburg (Pop. 3,324)	80	135

(4) Relative Contribution to the National Wilderness Preservation System: The North Revilla Roadless Area is located on the west coast of Revillagigedo (Revilla) Island, and is bordered to the east by Misty Fiords National Monument Wilderness. Behm Canal borders the area to the north. The area is generally bordered to the west by saltwater and areas of timber harvest and associated roads. The west shoreline of the area has been developed from Naha Bay north to Gedney Pass, with roads and harvest units extending along drainages into the North Revilla Roadless Area. The southwest part of the area is bordered to the west by the North Tongass Highway. Development has also occurred on both sides of Carroll Inlet, which extends into the area. Non-National Forest System lands, forest roads, and timber harvest units border the area to the south. The area is characterized by rugged terrain. Mountain slopes are steep, causing deeply incised drainages. The north portion of the area is dominated by an extensive lake chain associated with the Naha River and its tributaries. Elevation ranges from sea level to over 4,000 feet.

This large area is mostly natural appearing, but is influenced along its borders in many places by ongoing urban developments and developments associated with timber management on State, private and federal lands. The area has relatively high natural integrity and moderate apparent naturalness. The area southwest of the Naha LUD II area has moderate natural integrity and apparent naturalness. The Naha LUD II has high natural integrity and very high apparent naturalness. The Orchard Lake drainage has very high natural integrity and apparent naturalness. The northernmost peninsula of the roadless area has high natural integrity and apparent naturalness. The relatively small peninsula near Gedney Pass has moderate natural integrity and low apparent naturalness. The opportunity for solitude is high and the opportunity for primitive recreation is very high.

The area has moderate to high scenic quality; approximately 10 percent of the landscape is considered distinctive from a scenery standpoint. The Naha River drainage includes a system of large lakes with cabins and trail access provided. This area was designated as a LUD II area by Congress in 1990. The area has a few areas of karst development.

The roadless area includes about 64,804 acres of high-volume, old-growth forest. Of these acres, approximately 10,835 are mapped as high-volume, coarse-canopy old growth. It ranks among the top five Tongass roadless areas in terms of acres of high-volume, coarse-canopy old growth; the majority of this old growth is contained within non-development LUDs.

The North Revilla Roadless Area is classified as being in the Revilla Island/Cleveland Peninsula Biogeographic Province and makes up about 17 percent of the province. It is one of 12 inventoried roadless areas found within the province which make up about 60 percent of the province. Part of the Misty Fiords National Monument Wilderness is located in this province and makes up about 18 percent of the province. The province also includes two Congressionally designated LUD II areas (Naha and Anan) which make up about 5 percent of the province.

The North Revilla Roadless Area lies within two ecological sections; it represents 8 percent of the Inside Passage Fjordlands Ecological Section and 0.1 percent of the Dixon Entrance Lowlands Ecological Section. Both of these ecological sections are well represented by existing wilderness (20 and 56 percent, respectively) and by other existing non-development LUDs (32 and 28 percent, including 2 and 1 percent in LUD II, respectively).

More than half (56 percent) of the roadless area is in the Traitors Cove Metasediments Ecological Subsection; this portion of the roadless area represents 39 percent of the entire ecological subsection, 10 percent of which is protected in existing LUD II and 26 percent in other existing non-development LUDs. The Behm Canal Complex Ecological Subsection covers 30 percent of the roadless area; accounting for 29 percent of the ecological subsection,

65 percent of which is in existing wilderness and 18 percent is protected by other existing non-development LUDs. Fourteen percent of the roadless area is in the Bell Island Granitics Ecological Subsection; this portion of the roadless area represents 10 percent of the entire ecological subsection, 14 percent of which is in existing wilderness, 9 percent in LUD II, and is well represented by other existing non-development LUDs (57 percent). Less than 1 percent of the roadless area is in the Princess Bay Volcanics Ecological Subsection; this portion represents 5 percent of the entire ecological subsection. Approximately 62 percent of this ecological subsection is protected in existing wilderness and 8 percent in other existing non-development LUDs.

The North Revilla Roadless Area was rated 20 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 53rd from the highest (along with 16 other roadless areas) among the 109 Tongass inventoried roadless areas. Because of the large size of the roadless area and the degree of fragmentation created by ongoing developments on adjacent lands, five areas were rated separately. The area southwest of the Naha LUD II rated 19, the Naha LUD II rated 22, the Orchard Lake drainage rated 23, the peninsula located on the very north of the roadless area rated 21, and the relatively small peninsula located near Gedney Pass rated 18.

There is both local and national support for managing this area in an unroaded condition, but little support for designation of this area as wilderness. Designation would create a large wilderness that is influenced in many places by adjacent developments and uses. Some of the areas, such as in the Naha LUD II area receive very high public use that may be in conflict with wilderness objectives. The area includes the corridor for the Swan Lake, Lake Tyee Intertie powerline which is authorized and permitted for construction that began in 2002. The Upper Carroll Timber Sale is also located within the roadless area and is under contract. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low to moderate.

V. Environmental Consequences

The North Revilla Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, or 4 is implemented. Approximately 61 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 39 percent of the roadless area. The land in the development LUDs includes an estimated 10,274 acres that are suitable for timber production (17 percent of the suitable acres on the Ketchikan/Misty Fiords Ranger District). Approximately 1,212 of the suitable acres are classified as high-volume, coarse-canopy old growth. The Upper Carroll Timber Sale Contract would continue. Construction of the Swan Lake-Lake Tyee powerline intertie would continue. This area contains an estimated 44,368 acres of undiscovered locatable mineral resources that are considered to have very low potential for development. The recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area could be affected by ongoing development activities in those areas allowed by the Forest Plan.

Under Alternatives 2, 5, or 7, all of the existing LUD II area would be converted to Recommended Wilderness LUD. This would not affect timber sale projects because this area is currently allocated to a non-development LUD. The total area suitable for timber production would not change from Alternative 1. Ongoing recreation, special use, and minerals programs could be restricted in the Recommended Wilderness LUD area. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the existing LUD II portion of the roadless area, including old growth values, would be provided long-term protection if designated wilderness.

Under Alternative 6, a 194,128-acre portion of the area would be converted to Recommended LUD II. This would convert all lands not currently designated to LUD II to Recommended LUD II. Ongoing recreation, special use, and minerals programs would continue similar to current conditions with little restriction. No timber harvest would be allowed. The values associated with the natural settings of the roadless area, including old growth values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. Ongoing recreation, special use, and minerals programs could be restricted. No timber harvest would be allowed. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually

designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including old growth values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 526 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness		31,316			31,473		31,473	225,444
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area	1,272	1,272	1,272	1,272	1,272		1,272	
Remote Recreation	24,664	24,664	24,664	24,664	24,664		24,664	
Enacted Municipal Watershed								
Old-growth Habitat	31,364	31,364	31,364	31,364	31,361		31,361	
Semi-remote Recreation	38,285	38,285	38,285	38,285	38,278		38,278	
Recommended LUD II						194,128		
LUD II	31,316		31,316	31,316		31,316		
Wild, Scenic, Recreational River	10,018	10,018	10,018	10,018	10,014		10,014	
Experimental Forest								
Scenic Viewshed	11,830	11,830	11,830	11,830	11,775		11,775	
Modified Landscape	14,991	14,991	14,991	14,991	14,942		14,942	
Timber production	61,704	61,704	61,704	61,704	61,664		61,664	
TOTAL	**225,444**	**225,444**	**225,444**	**225,444**	**225,444**	**225,444**	**225,444**	**225,444**
Suitable Timber Lands	10,274	10,274	10,274	10,274	10,252	0	10,252	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Cleveland (528)

ACRES (NFS): 191,477

BIOGEOGRAPHIC PROVINCE: Revilla Island/Cleveland Peninsula

ECOLOGICAL SECTION: Inside Passage Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 25

I. Overview and Description

(1) Location and Access: The area is located on the southern end of Cleveland Peninsula on the mainland. Clarence Strait, Behm Canal, and Ernest Sound generally border the area to the south, east, and west, respectively. Several areas of non-National Forest System lands also border the area to the west. The area is bordered to the north by the Frosty (#210) and North Cleveland (#529) Roadless Areas. The city of Ketchikan is located approximately 15 miles southeast of the area. The city of Thorne Bay is located about 10 miles to the west across Clarence Strait. Ketchikan is on the Alaska Marine Highway and has regularly scheduled air service.

Access is by boat or floatplane through the major bays. This part of the peninsula is the major land area between Revillagigedo (Revilla) Island and Prince of Wales Island. A trail extends from Myers Chuck that provides access to some of the area. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: A large number of prehistoric and historical sites have been identified through archeological surveys and historical documents. Early settler history in this area centers on the fishing industry. The community of Meyers Chuck on the west shore of the area was founded as a base for the fishing fleet and a cannery. Other cannery sites were located on the east side of the Cleveland Peninsula. A fox farm was located on Square Island within Spacious Bay. During the early 1900's there was extensive exploration for valuable minerals in Helm Bay resulting in several patented claims. Goldschmidt and Haas (1946) identified commercial fish traps along the shorelines of this roadless area, as well as a former camp on Union Bay. They also noted that hunting/trapping and fishing for halibut or king salmon took place in the general vicinity of Union Bay and Vixen Inlet. Helm Bay is the traditional origin place of the Kiksudi clans from Wrangell and Sitka. Port Stewart is the traditional origin place of the Gonoxaidi clan of the Stikinkwan.

(3) Geography and Topography: This roadless area is located on the Cleveland Peninsula, which extends south from the mainland. The area is characterized by a combination of gently rolling topography to moderately rugged mountains. Elevations range from sea level to just over 3,000 feet. Many of the drainages are broad, flat areas. There are a number of streams and lakes within the area.

The area includes 178 miles of shoreline on saltwater, approximately 633 acres of alpine tundra, and 687 acres classified as rock. The area also includes 1,786 acres of lakes and 142 islands and islets (7 of which are greater than 10 acres) totaling 275 acres of islands.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the Revilla Island/Cleveland Peninsula Biogeographic Province. This area has a variable climate with warm and wet conditions predominating on the land on the outer coast and much cooler conditions near the mainland.

Ecological Section/Subsection. The Cleveland Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E). Within this area there are five ecological subsections (see table below). The Traitors Cove Metasediments Ecological Subsection, composed mostly of glacially carved sedimentary rock, covers much of the northeastern portion of the Cleveland Roadless Area (34%). Steep slopes give way to deeply incised valleys. Landslides are a common occurrence. Productive hemlock and Sitka spruce forests grow on well-drained soils on slopes. Forested wetlands are found in poorly drained soils along the valley floors. The Clarence Strait Volcanics Ecological Subsection is the other subsection of significant areal extent (31%), consisting of volcanic peaks bordering the east side of Clarence Strait in a southwesterly or northeasterly direction. Glaciers have smoothed the topography and left a legacy of broad valleys, steep slopes, alpine lakes, hanging valleys, and coastal lowlands. Plant cover is dependent on soil permeability and much of the Clarence Strait Volcanics Ecological Subsection is not forested. Productive hemlock or hemlock-spruce forests are limited to well-drained slopes. The Vixen Inlet Till Lowlands Ecological Subsection is found in the northwest portion of the Cleveland Roadless Area (14% of roadless area). Glacially deposited till, covered with poorly drained soils, forms a low isthmus across the Cleveland Peninsula. Productive forests are restricted to more porous soils on slopes and near incised streams. Found along the eastern edge of the roadless area, the Zimovia Strait Complex Ecological Subsection is typified by broad glacial valleys and rounded hills (11% of roadless area). Roughly half of the subsection is productive hemlock forest which may include cedar or Sitka spruce. Stratified sedimentary rock and volcanic intrusions are found beneath mineral soils. The remainder of the Cleveland Roadless Area, between Union Bay and Vixen Inlet, is composed of the Ketchikan Mafics/Ultramafics Ecological Subsection (10% of roadless area). The unique composition (low slilca, high calcium, iron, and magnesium content) and relative impermeability of mafic rock have produced a precipitous landscape. Peaks up to 3,000 feet elevation arise from the coast. Exceptional plant communities are found on mafic soils, but the steep topography and soil chemistry are not favorable to forests (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Inside Passage Fjordlands	Traitors Cove Metasediments	34%
	Clarence Strait Volcanics	31%
	Vixen Inlet Till Lowlands	14%
	Zimovia Strait Complex	11%
	Ketchikan Mafics/Ultramafics	10%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock and are typically about 40 inches deep.

(c) Vegetation: This area is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with a large cedar component. There are numerous interspersed areas of the muskeg. Approximately 4,321 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Approximately 633 acres of alpine vegetation are mapped for the area.

There are approximately 182,596 acres mapped as forest land, of which 98,657 acres or 54 percent are mapped as productive old-growth forest. Of the productive old growth, 45,439 acres or 46 percent are mapped as high-volume old-growth forest. The productive old growth includes about 5,070 acres of high-volume, coarse-canopy old growth. The area also includes 1,215 acres of second growth where beach timber harvest has occurred in the past.

(d) Fish Resources: Streams in the area provide habitat for pink, chum, sockeye, and coho salmon, as well as steelhead, resident cutthroat trout, and Dolly Varden char. On the Cleveland Peninsula, the majority of salmonid habitat and production occurs in the Vixen, Port Stewart, Black Bear, and Wasta watersheds.

(e) Wildlife Resources: This area has a population of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, loons, and common waterfowl. There is also a small population of brown bear. Mountain goats have been reported throughout this area. A cougar was observed in Meyers Chuck in 1998.

Marbled murrelets, northern goshawks, American Peregrine falcon, and harlequin ducks may be found in this roadless area. Trumpeter swans use the major saltwater inlets and freshwater lakes as resting areas during their migrations. Moose do not inhabit this area.

(5) Management Direction and Current Uses: This roadless area was allocated to seven Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These seven LUDs are Timber Production, Modified Landscape, Minerals, Transportation and Utility System (TUS), Semi-remote Recreation, Old-growth Habitat, and Remote Recreation. Both the TUS and Minerals LUDs are secondary LUDs, which overlay the other land uses.

LUD	Acres
Timber Production	63,329
Modified Landscape	13,989
Minerals*	17,462
Transportation and Utility System	NA
Semi-remote Recreation	75,196
Old-growth Habitat	38,938
Remote Recreation	25

* Note that acres in the Minerals LUD are included in the Timber Production, Modified Landscape, Old-growth Habitat, and Semi-remote Recreation LUD acres.

Approximately 40 percent of this area (not including the LUD overlays) was allocated to a development LUD (Timber Production, Modified Landscape). Approximately 33 percent of the roadless area was allocated to the Timber Production LUD. The Modified Landscape LUD was assigned to approximately 7 percent of the roadless area. Approximately 9 percent of the roadless area was allocated to the Minerals LUD overlay, primarily in the Mt. Burnett area. A potential power transmission corridor travels through this roadless area, which is a part of the Transportation and Utility System LUD overlay.

Most of this roadless area, approximately 60 percent, was allocated to a non-development LUD (Semi-remote Recreation, Old-growth Habitat, Remote Recreation). Approximately 39 percent of this roadless area was allocated to the Semi-remote Recreation LUD. Small islands associated with the roadless area are allocated to Semi-remote Recreation LUD as well. In the Behm Canal, Wasta Creek, and Upper Cleveland Peninsula areas, approximately 20 percent of the roadless area was allocated to the Old-growth Habitat LUD.

Most of the Cleveland Roadless Area was historically included in the contingency area for the Ketchikan Pulp Company (KPC) Long-term Timber Sale. The Emerald Bay Timber Sale FEIS (USDA Forest Service, 2001) will harvest approximately 11 million board feet (MMBF) from 625 acres of National Forest System lands located within the Cleveland Roadless Area. This would require 3.8 miles of low-impact temporary road construction. Logs would be transferred to a new log transfer facility in Emerald Bay. The timber would be sold in one sale, originally scheduled to begin in 2001. This proposed timber sale is identified in the Forest Service's 10-Year Action Plan and scheduled for 2003.

This area contains one tract of mineral exploration activity at Union Bay. The 17,462-acre Union Bay tract currently has ongoing iron exploration. Helm Bay has a 7,204 acre abandoned mining tract. There are rights-of-way for a waterline and a powerline, an electronics site, and several Coast Guard reservations for navigation aids in this roadless area.

The outstanding saltwater fishing in the major bays is a major attraction to this area. Other recreation activities pursued in the area include boating, hiking, and camping. There are three Public Recreation Cabins (Rainbow Lake, Helm Creek, and Helm Bay) located in the area. The cabins located within Helm Bay also have mooring buoys associated with them. One freshwater fishing outfitter/guide operated in the area for 3 service days in 2000. One big game outfitter/guide operated in the area for two goat hunts in 2000. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that eight of the VCUs located within this area are subsistence use areas with a high sensitivity to disturbance. Residents of Myers Chuck use this area for subsistence use.

(6) Appearance (Apparent Naturalness): The Cleveland Roadless Area has remained generally unaltered by human activity, with the exception of several areas where beach logging has occurred on the east side of the area and mining activity in Helm Bay. Timber harvest using a helicopter has occurred in the Helm Bay area on patented mining claims. The other exceptions include the three Public Recreation Cabins and hiking trail located in the area. The area also includes an electronics site. The area generally displays natural characteristics when viewed from nearby water travel routes and when inside the area.

(7) Surroundings (External Influences): There are few external influences in this roadless area. The most significant influence is a Ketchikan Pulp Company-owned parcel of land in the Granite Creek and Helm Bay drainages surrounded by the roadless area. This parcel (previous patented mining claim) of land was logged in 1998 by KPC utilizing helicopter loggings systems. No roads were built to harvest this timber. Sealaska Native Cooperation owns land in the southwest peninsula, which they manage for timber harvest. The settlement of Meyers Chuck, located on State and private land, borders part of the area to the west. Residents of and visitors to Meyers Chuck venture into the roadless area. The State of Alaska owns lands in southern portion of Spacious Bay and Square Island as well as land around Union Bay and Vixen Harbor.

(8) Attractions and Features of Special Interest: The main attraction to the area is the outstanding saltwater fishing in the major bays. Other areas of special interest are the large tidal flats at the ends of the bays, and the upland lakes between Helm Bay and Clarence Strait. The area contains 28 inventoried recreation places, which cover 91,038 acres, or 48 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The boundaries of this roadless area did not change significantly between 1989 and 2003.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is largely unmodified and is generally not fragmented by land ownership or land use patterns. Because it is surrounded by large saltwater passages or other large roadless areas, it has a high degree of natural integrity. Overall, the area has very high natural integrity and apparent naturalness and is suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is very high to outstanding opportunity for solitude and primitive recreation in the area. With the exception of the Helm Bay, Myers Chuck, Port Stewart, and Smugglers Cove areas, a person is not likely to encounter other people when boating, hiking, or camping within this roadless area. One freshwater fishing outfitter/guide operated in the area for 3 service days in 2000. One big game outfitter/guide operated in the area for 2 goat hunts in 2000. There are three Public Recreation Cabins (Rainbow Lake, Helm Creek, and Helm Bay) located in the area, as well as a hiking trail.

The area provides primarily primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	171,694	90%
Semi-Primitive Non-Motorized (SPNM)	2	0%
Semi-Primitive Motorized (SPM)	18,327	10%
Roaded Natural (RN)	1,128	1%
Roaded (R)	261	0%

The area contains 28 inventoried recreation places, which cover 91,038 acres, or 48 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	19	72,537
SPNM	0	0
SPM	8	17,113
RN	1	1,128
R	2	261

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Cleveland Roadless Area Roadless Area was 23 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 25. This rating is more reflective of the large size of the area and its ability to absorb the various developments and activities associated with the area.

(4) Ecologic and Geologic Values: The Cleveland Roadless Area is part of a much larger roadless land area that includes all of Cleveland Peninsula through the Misty-Fiord National Monument Wilderness Area and north through the Stikine Leconte Wilderness Area. The other eight roadless areas that comprise this larger area are Frosty (#210), North Cleveland (#529), Anan (#209), Bradfield (#208), Harding (#207), Cone (#206), Aaron (#205), and Madan (#204).

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified two VCUs (VCU 709 by Union Bay and 722 by Spacious Bay) as primary salmon producers. The rest of the VCUs are listed as secondary salmon producers. No VCUs are listed as primary sport fish producers (ADF&G, 1998).

Streams in the area provide habitat for pink, chum, sockeye, and coho salmon, as well as steelhead, resident cutthroat trout, and Dolly Varden char. On the Cleveland Peninsula, the majority of salmonid habitat and production occurs in the Vixen, Port Stewart, Black Bear, and Wasta watersheds (Emerald Bay EIS, USDA Forest Service, 2000). The Anadromous Waters Catalogue (ADF&G, 2000) also identified Meyers Stream and Cannery, Falls, and Granite Creeks as fish-bearing streams in this area. Black Bear Creek receives an estimated annual peak escapement of 61,400 pink salmon, while Wasta Creek receives an estimated 52,600 pink salmon. Wasta Creek also has good coho salmon smolt production capability (ADF&G, 1998).

(b) Wildlife Resources: This area has a high population of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, loons, and common waterfowl. There is also a population of brown bears on the island and mountain goats have been reported throughout this area. A cougar was observed in Meyers Chuck in 1998. Marbled murrelets, northern goshawks, and harlequin ducks may be found here. The American Peregrine falcon, a federally listed threatened species, may migrate through the area. Trumpeter swans use the major saltwater inlets and freshwater lakes as resting areas during their migrations. Moose do not inhabit this area.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale

(endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, eight sensitive plant species are known or suspected to occur in the Ketchikan Ranger District.

(d) Karst, Cave, and Other Geologic Resources: The mapped karst resources encompass approximately 22 acres or far less than one percent of the roadless area. There are no known karst or cave resources in this roadless area. There are no glaciers or unique geologic features in this area.

(5) Scientific and Educational Values: There are no known features of ecologic, geologic, scientific, or cultural significance. There are no existing or proposed Research Natural Areas in this roadless area. The city of Ketchikan is located approximately 15 miles southeast of the area.

(6) Scenic Values: This area is part of the Coastal Hills visual character type, which is characterized by moderately steep landforms, predominantly rounded summits, elevations up to 4,500 feet, and flat-floored, U-shaped valleys. This roadless area is very representative of this character type, particularly because of the rolling, but steep terrain and wide valleys.

The Cleveland Roadless Area has remained generally unaltered by human activity, with the exception of several areas where beach logging has occurred on the east side of the area and the harvest of timber from Granite Creek located on KPC land Historic mining has taken place in Union Bay and Helm Bay. Other exceptions include the three Public Recreation Cabins, mooring buoys, dispersed recreation sites and hiking trail located in the area. The area also includes an electronics site. The area generally displays natural characteristics when viewed from nearby water travel routes and when inside the area. Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include: Clarence Strait (Alaska Marine Highway and Tour Ship Route); Spacious Bay, Vixen Inlet, Union Bay, Helm Bay, Port Stewart, Smugglers Cove, Bond Bay, and west Behm Canal (Saltwater Use Areas); Meyers Chuck (Community); Vixen Harbor (Boat Anchorage); Rainbow Lake, Helm Lake, and Helm Bay (Public Recreation Cabins); and Meyers Chuck Trail (Hiking Trail).

Most of this area (approximately 84 percent) is rated a Variety Class B and possesses a degree of landscape diversity that is common to the character type. About 6 percent of the area is rated as Variety Class A (possesses landscape diversity that is unique for the character type). This Variety Class applies to the more scenic landscapes found in the rugged terrain around Rainbow Lake, and in the area around Mount Burnett and Vixen Harbor. About 10 percent of the area is rated Variety Class C, which possesses a low degree of landscape diversity.

Approximately 98 percent of the Cleveland Roadless Area was inventoried as Type I Existing Visual Condition (EVC), where the landscape has remained essentially unaltered by human activity with the exception of logging and mining in Helm Bay. Another 2 percent is EVC Type III, in which the average person notices changes in the landscape, but they do not attract significant attention.

(7) Social, Cultural, and Historical Values: A large number of prehistoric and historical sites have been identified through archeological surveys and historical documents. Early settler history in this area centers on the fishing industry and mining. The community of Meyers Chuck on the west shore of the area was founded as a base for the fishing fleet and a cannery. Other cannery sites were located on the east side of the Cleveland Peninsula. A fox farm was located on Square Island within Spacious Bay. During the early 1900's there was extensive exploration for valuable minerals in Helm Bay resulting in several patented claims. Goldschmidt and Haas (1946) identified commercial fish traps along the shorelines of this roadless area, as well as a former camp on Union Bay. They also noted that hunting/trapping and trolling for halibut or King Salmon took place in the general vicinity of Union Bay and Vixen Inlet. Helm Bay is the traditional origin place of the Kiksudi clans from Wrangell and Sitka. Port Stewart is the traditional origin place of the Gonoxaidi clan of the Stikinkwan.

The outstanding saltwater fishing in the major bays is a major attraction to this area. Other recreation activities pursued in this area include boating, hiking, and camping. There are three Public Recreation Cabins (Rainbow Lake, Helm Creek, and Helm Bay) located in the area and three mooring buoys. There is one short trail leading out of Meyers Chuck. One freshwater fishing outfitter/guide operated in the area for 3 service days in 2000. Meyers Chuck residents use the area for subsistence. Residents of Ketchikan use the area for personal use fisheries, especially for sockeye salmon. The Tongass Fish and Wildlife Resource Assessment indicated that eight of the VCUs (VCUs 708, 709, 710, 711, 712, 713, 720, and 721 along Clarence Strait and Ernest Sound) are listed among the VCUs with highest sensitivity to disturbance of subsistence use areas. Five of the VCUs in this area (715, 716, 718, 719, and 722 mostly along Behm Canal) were included among the VCUs with highest community use values. Two other VCUs (713, 714, and 720 at the tip of the peninsula) were identified in the third tier of highest value community use areas (ADF&G, 1998).

The Emerald Bay Timber Sale FEIS (USDA Forest Service, 2001) proposed to harvest approximately 11 million board feet (MMBF) from 625 acres of National Forest System land located within the Cleveland Roadless Area. This would require 3.8 miles of low-impact road construction. Logs would be transferred to a new log transfer facility in Emerald Bay. The timber would be sold in one sale, originally scheduled to begin in 2001. This timber sale is identified in the Forest Service's 10-Year Action Plan and scheduled for 2003.

(8) Manageability as Wilderness and Boundary Conditions/Changes: The area and its boundaries could easily be managed for wilderness objectives.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: The long-term recreation potential of the area centers on continued management of the cabin system and additional trails for dispersed recreation activity. Outfitter and guide operations could increase.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: There is considerable potential for fish habitat improvement and fish pass construction on the several streams in the area; however, no fish habitat enhancement projects are currently planned for this roadless area.

(4) Wildlife Resources: No wildlife enhancement projects are planned for this roadless area.

(5) Timber Resources: There are 98,657 acres mapped as productive old growth and 1,215 acres mapped as second growth due to harvest in the roadless area. Of these acres, 69,948 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 15,556 acres or 8 percent of this roadless area are estimated to be suitable for timber production. Approximately 7,197 of the suitable acres are mapped as high-volume old growth; of these acres, 767 are mapped as high-volume, coarse-canopy old growth.

The Emerald Bay Timber Sale FEIS (USDA Forest Service, 2001) proposes to harvest approximately 11 million board feet (MMBF) from 625 acres of National Forest System land located within the Cleveland Roadless Area. This would require 3.8 miles of low-impact road construction. Logs would be transferred to a new log transfer facility in Emerald Bay. The timber would be sold in one sale, originally scheduled to begin in 2001. This proposed timber sale is identified in the Forest Service's 10-Year Action Plan and scheduled for 2003

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: There are several located and patented claims within this roadless area and moderate potential for mineral development. These claims include Union Bay and Helm Bay. The 17,492-acres Union Bay tract currently has ongoing iron exploration. An abandoned gold mine is located on the 7,204 acre Helm Bay tract. There is also minor potential for copper and lead exploration (USGS Mineral Resources Data website, 2001). An area around Mount Burnett was assigned to the Minerals LUD in the 1997 Tongass Land and Resource Management Plan.

This area contains 25,243 acres of land identified as a mineral activity tract. Approximately 7,768 acres are identified as having a high potential and 17,475 as having low potential for expanding mineral exploration or development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). A total of 17,462 of these acres are allocated to the Minerals LUD. The Minerals LUD is intended to encourage the prospecting, exploration, development, mining, and processing of locatable minerals in areas with the highest potential for minerals development. It incorporates standards and guidelines to insure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when minerals developments occur. In addition, this area contains an estimated 37,146 of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 36,932 acres are considered to have moderate potential for development.

(8) Transportation and Utilities: Two potential power transmission corridors were identified in this area in the 1997 Tongass Land and Resource Management Plan. The potential corridor initially extends along the northwest shore of Helm Bay before branching into two corridors. One of these corridors continues northwest to Meyers Chuck. The other corridor extends north/northeast along the length of the Cleveland Peninsula and continues northeast to the Bradfield Canal and beyond. The State and Southeast Conference identify a potential transportation corridor from Spacious Bay north to Santa Anna Inlet for long-term needs.

(9) Water Availability and Use: There are no existing or planned hydroelectric or domestic water projects within the roadless area

(10) Areas of Scientific Interest: There are no areas of scientific interest in this area.

(11) Land Use Authorizations: There are rights-of-way for a waterline and a powerline, a permitted residence on Square Island, an electronics site, and several Coast Guard reservations for navigation aids in this roadless area. Outfitter and guide permitting is expected to continue.

(12) Land Status: All land within the roadless area is part of the National Forest System. Encumbered lands within the roadless area are located just west of Spacious Bay. There are no Alaska Native land selections within the area boundary.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest

(a) Interest Expressed by Local Users and Residents: The area receives significant local use for some subsistence and recreation activity.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Cleveland Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also identified Black Bear Creek and the creek flowing north into Vixen Inlet for protection as Wild and Scenic Rivers.

(c) Public Input During Forest Plan Revision and Appeals: This area was specifically addressed in public input received during the Forest Plan revision and appeal. Most comments on the 1991 and 1996 TLMP revision that addressed the Cleveland Peninsula asked for either no future logging, a deferral of logging plans, or less intensive logging than planned. The main reasons given were the protection or retention of roadless recreation opportunities (hunting, fishing, and scenic viewing) and old-growth wildlife habitat. The Tongass Conservation Society identified the Cleveland Peninsula as one of the last

unfragmented old growth areas left with high wildlife values (deer range), important subsistence values, and importance for biodiversity. The proximity of the area to Ketchikan (roadless recreation and tourism) was another reason often mentioned. Many Meyers Chuck residents and the Meyers Chuck Community Association were concerned with water quality and development near them, and asked for no roads in the vicinity of Meyers Chuck, especially their watershed. Some commenters felt that timber harvest could occur as long as the coastal areas and lakes were not disturbed; others asked that logging go ahead on the peninsula. Some thought that roaded recreation (following timber sale development) would be good, others wanted the area kept roadless. Specific areas identified in the comments included Helm, Spacious, Port Stewart, and Union Bays, Helm Lake, and Bear Creek.

Over 1,500 letters were received on the DEIS in response to a National Wildlife Federation article, a Southeast Alaska Conservation Council (SEACC) Alert newsletter, and Wilderness Society or Sierra Club articles or newsletters. All of these articles listed specific areas for the public to include in their comments, and the majority of writers did so. This list included the Cleveland Peninsula. Some publications just asked for "protection" of their identified areas, others asked that either Remote Recreation or Old-growth Habitat prescriptions be applied.

The area was also identified in a number of appeals that expressed concern that while the southwestern portion of the peninsula was fully protected, most of the northeastern peninsula is still open to logging and that the area from Spacious Bay to the southern tip at Camano Point be managed for Semi-remote Recreation and protected from logging and roading and that the Cleveland Peninsula be designated as wilderness recreation and that plans to enter the peninsula with roads and logging be aborted.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: The management of this area was the topic of discussion for the Cleveland Collaborative Stewardship Group. The Cleveland Roadless Area includes the project area for the Emerald Bay Timber Sale. Twenty-two agencies, organizations, and individuals submitted written comments on the Emerald Bay Draft EIS. Many respondents were apprehensive over the Forest Service's proposals to build roads and harvest timber on the Cleveland Peninsula. They felt the roadless nature of the Cleveland Peninsula should be retained and referenced a letter from the governor of Alaska corroborating that statement. The Emerald Bay area was identified as important for subsistence, ecotourism, public recreation, hunting, and trapping. Commenters noted that building roads in this area would adversely affect these resources, as well as old growth areas. Concerns were also expressed that the Forest Service would be setting a precedent by proposing to build a road through a medium Old-Growth Reserve. The possible effects of the proposed action upon fish and wildlife resources were also cited as a concern. Four appeals were received on this decision with no resolution as of January 2002.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as one of the 13 roadless areas they considered to have outstanding fish and wildlife values. They noted that along with three other roadless areas that form the Cleveland Peninsula, it serves as a corridor for many mainland species to colonize the archipelago of Southeast Alaska. Wildlife habitat on the Cleveland Peninsula is naturally fragmented by large bays penetrating the peninsula from both sides, which create a number of "pinch points." Some interior areas of the peninsula are connected by low elevation passes that are migration corridors for many wildlife species. They indicated that development in these areas is likely to inhibit movement of animals and restrict immigration and emigration, effectively isolating the peninsula from the mainland. The Peninsula is thought to serve as an important source of natural colonization of the southern and central islands of the Alexander Archipelago by mainland species such as moose and wolves. This is largely because the peninsula penetrates the archipelago much further than any other mainland peninsula in southeast Alaska. They indicated that there has been strong local and national support for managing these areas in a roadless

condition. They stated that the important wildlife values provided by this area warrant management that ensures the long-term integrity of its habitats, ecosystem processes, and ecological functions.

In comments relative to the 1997 Forest Plan, the Governor of Alaska recommended that logging and construction of logging roads be avoided in important public interest areas such as the Cleveland Peninsula (most of RA# 528, 529, 209, and 210). This comment was reiterated by the Governor in scoping comments regarding the SEIS and in comments by the Division of Governmental Coordination on the Draft SEIS.

Alaska Department of Fish and Game recommended permanent roadless status for the Cleveland Peninsula in their comments on the Draft SEIS.

The Alaska Department of Fish and Game rated the Cleveland and North Cleveland roadless areas (VCUs 719, 710, 717, 718, 720, 721, 722, and 723) as the highest priorities for protection in the Ketchikan Area (outside of POW Island). This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The Department of Transportation and Public Facilities noted that there is a corridor across Cleveland Peninsula that passes through this roadless area; it is identified in the Southeast Alaska Transportation Plan under Long Term Actions and was not included in the SEIS. They indicated that this corridor is for a proposed highway that would link new ferry terminals on Spacious Bay and Santa Anna Inlet and would be a component of the Inside Passage Highway.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

SEACC identified the Cleveland roadless area as part of the Cleveland Peninsula, which includes Roadless Areas 209, 210, 528, and 529. They recommend this entire area, a 200,000-acre arm of the mainland, as LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 204, 205, 206, 207, 208, 209, 210, 528, and 529 as a contiguous complex of roadless areas that should be considered one roadless area and recommended it for permanent protection as LUD II. The Tongass Conservation Society indicated that the Cleveland Peninsula has high wildlife, subsistence, and biodiversity and was especially important for brown bears. Audubon Alaska recommended that Cleveland Peninsula should be protected from logging and road building.

Many individual commenters identified the Cleveland Peninsula as an area in need of protection. Some individuals recommended this area for permanent protection as wilderness. Port Stewart and Helm Bay were identified as areas important for small boats from Ketchikan for deer hunting. It is considered by some to be the only intact area within easy skiff distance from Ketchikan for hunting deer and contains an important and somewhat unique mountain goat population.

(2) Nearby Roadless and Wilderness Areas and Uses: South Etolin Island Wilderness is located northwest across Ernest Sound from the Cleveland Roadless Area, approximately 3 miles away at its closest point. Misty Fiords National Monument Wilderness is located approximately 21 miles to the east. The area is bordered to the northeast by the Frosty (#210) and North Cleveland (#529) Roadless Areas. Other nearby roadless areas include Behm Islands (#525) and North Revilla (#526) located southeast across Behm Canal from the area, and Kasaan (#520) located southwest across Clarence Strait.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	190	205
Ketchikan (Pop. 14,070)	15	15
Wrangell (Pop.2,308)	40	40
Petersburg (Pop. 3,324)	70	85

(4) Relative Contribution to the National Wilderness Preservation System: The Cleveland Roadless Area is located on the southern end of Cleveland Peninsula on the mainland. Clarence Strait, Behm Canal, and Ernest Sound generally border the area to the south, east, and west, respectively. Several areas of non-National Forest System lands also border the area to the west. The area is bordered to the north by the Frosty (#210) and North Cleveland (#529) Roadless Areas. This area is characterized by a combination of gently rolling topography to moderately rugged mountains. Elevations range from sea level to just over 3,000 feet. Many of the drainages are broad, flat areas. There are a number of streams and lakes within the area.

The Cleveland Roadless Area is mostly unmodified and natural appearing. The natural integrity and apparent naturalness is very high. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

The roadless area has moderate to high scenic quality; approximately 6 percent of the landscape is considered distinctive for the character type from a scenery standpoint. Cleveland Peninsula is part of the mainland and extends southwestward into the islands that make up Southeast Alaska. It is also connected to the large roadless area that follows the Canadian border from Skagway to Hyder. The area has historic and cultural values. There are no other known features of ecologic, geologic, scientific, or cultural significance.

The roadless area includes about 45,439 acres of high-volume, old-growth forest. Of these acres, approximately 5,070 are mapped as high-volume, coarse-canopy old growth.

The Cleveland Roadless Area is classified as being in the Revilla Island/Cleveland Peninsula Biogeographic Province and makes up about 14 percent of the province. It is one of 12 inventoried roadless areas found within the province which make up about 60 percent of the province. Part of the Misty Fiords National Monument Wilderness is located in this province and makes up about 18 percent of the province. The province also includes two Congressionally designated LUD II areas (Naha and Anan) which make up about 5 percent of the province.

The Cleveland Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents 7 percent of the ecological section. Approximately 20 percent of the Inside Passage Fjordlands Ecological Section is in existing wilderness, 2 percent is in existing LUD II, and 30 percent is protected by other existing non-development LUDs.

One-third (34 percent) of the roadless area is in the Traitors Cove Metasediments Ecological Subsection; this portion of the roadless area represents 20 percent of the entire ecological subsection, 10 percent of which is protected in existing LUD II and 26 percent in other existing non-development LUDs. Nearly one-third (31 percent) of the roadless area is in the Clarence Strait Volcanics Ecological Subsection; this portion of the roadless area represents 23 percent of the entire ecological subsection, 15 percent of which is in existing wilderness and is well represented by other existing non-development LUDs (34 percent). Eleven percent of the roadless area is in the Zimovia Strait Complex Ecological Subsection; this portion of the roadless area represents 9 percent of the entire ecological subsection, 5 percent of which is protected in existing wilderness and 26 percent in other existing non-development LUDs. Fourteen percent of the roadless area is in the Vixen Inlet Till Lowlands Ecological Subsection representing 97 percent of the ecological subsection. None of this ecological subsection is protected in existing wilderness or LUD II, however, 40 percent is protected by other existing non-development LUDs. The remainder (10 percent) of the roadless area is in the Ketchikan Mafics/Ultramafics Ecological Subsection; this portion represents 27 percent of the entire ecological subsection, none of which is in existing wilderness or LUD II, but 46 percent is protected by other existing non-development LUDs.

The Cleveland Roadless Area was rated 25 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 12th from the highest (along with 12 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is considerable local and national support for managing this area in an unroaded condition, and some support for designation of this area as wilderness. Designation would create a large wilderness of an area that many people feel should be protected from development. It would provide wilderness on a piece of the mainland that is bordered by islands of Southeast Alaska. Designation would provide long-term Congressional protection for 97 percent of the

Vixen Inlet Till Lowlands Ecological Subsection and 27 percent of the Ketchikan Mafics/Ultramafics Ecological Subsection; these subsections do not have any areas within existing wilderness or LUD II. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be high to very high.

V. Environmental Consequences

The Cleveland Roadless Area would be managed under the existing Forest Plan if Alternatives 1or 2 are implemented. Approximately 60 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 40 percent of the roadless area. The land in the development LUDs includes an estimated 15,556 acres that are suitable for timber production (24 percent of the suitable acres on the Ketchikan/Misty Fiords Ranger District). Approximately 767 of the suitable acres are classified as high-volume, coarse-canopy old growth. Planning for the Emerald Timber Sale would continue. This area contains 25,243 acres of land identified as a mineral activity tract. Approximately 7,768 acres are identified as having a high potential and 17,475 as having low potential for expanding mineral exploration or development of locatable minerals. In addition, this area contains 37,146 of undiscovered locatable mineral resources; 36,932 acres are considered to have moderate potential for development. The recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area could be affected by developments allowed by the Forest Plan.

Under Alternative 4, an 80,852-acre portion of the Semi-remote Recreation and Old-growth Habitat LUDs would be converted to Recommended Wilderness LUD. This would not affect timber sale projects because this area is currently allocated to non-development LUDs. The total area suitable for timber production would not change from Alternative 1. Ongoing recreation, special use, and minerals programs could be restricted in the Recommended Wilderness LUD area. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the southern portion of the roadless area would be provided long-term protection if designated wilderness. Designation would provide long-term Congressional protection for portions of the Vixen Inlet Till Lowlands Ecological Subsection and the Ketchikan Mafics/Ultramafics Ecological Subsection; these subsections do not have any areas within existing wilderness or LUD II.

Under Alternatives 3, 5, 7, or 8, the entire area would be converted to Recommended Wilderness LUD. No timber harvest would be allowed. Ongoing recreation, special use, and minerals programs could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area would be provided long-term protection if designated wilderness. Designation would provide long-term Congressional protection for 97 percent of the Vixen Inlet Till Lowlands Ecological Subsection and 27 percent of the Ketchikan Mafics/Ultramafics Ecological Subsection; these subsections do not have any areas within existing wilderness or LUD II.

Under Alternative 6, the entire area would be converted to Recommended LUD II. Ongoing recreation, special use, and minerals programs would continue similar to current conditions with little restriction. No timber harvest would be allowed. The values associated with the natural settings of the roadless area would be provided long-term protection if designated LUD II. Designation would provide long-term Congressional protection for 97 percent of the Vixen Inlet Till Lowlands Ecological Subsection and 27 percent of the Ketchikan Mafics/Ultramafics Ecological Subsection; these subsections do not have any areas within existing wilderness or LUD II.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 528 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness			191,477	80,852	191,477		191,477	191,477
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation	25	25		20				
Enacted Municipal Watershed								
Old-growth Habitat	38,938	38,938		31,180				
Semi-remote Recreation	75,196	75,196		2,108				
Recommended LUD II						191,477		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	13,989	13,989		13,989				
Timber production	63,329	63,329		63,329				
TOTAL	**191,477**	**191,477**	**191,477**	**191,477**	**191,477**	**191,477**	**191,477**	**191,477**
Suitable Timber Lands	15,556	15,556	0	15,556	0	0	0	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: North Cleveland (529)

ACRES (NFS): 109,639

BIOGEOGRAPHIC PROVINCE: Revilla Island/ Cleveland Peninsula

ECOLOGICAL SECTION: Inside Passage Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 26

I. Overview and Description

(1) Location and Access: The area is located north of Revillagigedo (Revilla) Island. The area includes part of the Cleveland Peninsula on the mainland and a number of islands in Behm Canal, including Bell and Black Islands. Behm Arm and Behm Narrows border the area to the south. The area is bordered to the east by the Misty Fiords National Monument Wilderness and the Harding Roadless Area (#207). The Cleveland (#528), Frosty (#210), and Anan (#209) Roadless Areas border the area to the west and north.

The city of Ketchikan, on the Alaska Marine Highway and with regularly scheduled air service, is located approximately 25 miles south of the area. The city of Wrangell is located about 35 miles to the northwest. Access to the area is via boat or floatplane on saltwater or from the neighboring roadless areas. There are a number of trails in the area that provide access to the area's interior. Many people access this roadless area by floatplane. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: A number of prehistoric and historic sites have been identified through archaeological surveys, oral history and historic documents. The interior of this area has seen little influence of human activity. Some coastal locations were occupied by prehistoric and historic Native cultures. Goldschmidt and Haas (1946) identified former smokehouse/cabin locations adjacent to Yes and Short Bays, as well as a former village adjacent to Yes Bay. They also identified fishing at the mouth of Yes Bay. Several of the bays and islands were used by early commercial fishing interests and, in recent times, commercial recreation (lodges on Bell Island and in Yes Bay) and individual recreation users. These land uses are closely tied to the excellent salmon fishing in the adjacent saltwater and streams. Yes Bay in particular has a long historic use including a cannery.

(3) Geography and Topography: The area is characterized by very rugged terrain. The steep mountain slopes cause deeply incised drainages. There are large lakes at the headwaters of the larger streams, and numerous smaller lakes in most drainages. There are a few small glaciers. Freshwater lakes cover approximately 4,438 acres. Elevations range from sea level to 4,000 feet. The major islands in Behm Canal are less rugged than the mainland, but are characterized by steep slopes starting at saltwater and ranging to 3,000 feet. The area contains 24 islands and islets (4 of which are greater than 10 acres) totaling 14,374. Alpine tundra covers 5,058 acres, rock covers 6,908 and ice and snow cover 31 acres. There are 95 miles of shoreline.

(4) Ecosystem:

(a) Classification: Biogeographic Province. This area is part of the Revilla Island/Cleveland Peninsula Province, which has a variable climate with warm and wet conditions on land near the outer coast and much cooler conditions near the mainland.

Ecological Section/Subsection. The North Cleveland Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E). Within this area there are two ecological subsections (see table below). The Bell Island Granitics Ecological Subsection, covering all but the western edge of the North Cleveland Roadless Area (96% of roadless area), is characterized by rounded hills and narrow,

glacially scoured valleys. Within this subsection, mountain slope soils are usually well-drained, mineral soil, while lowlands, lake margins and wetlands are typically poorly drained soils (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Inside Passage Fjordlands	Bell Island Granitics	96%
	Zimovia Strait Complex	4%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock, and are typically about 40 inches deep.

(c) Vegetation: Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with smaller components of cedar. Approximately 364 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Approximately 5,058 acres of alpine vegetation are mapped in this area.

There are approximately 88,478 acres mapped as forest land, of which 47,348 acres or 54 percent are mapped as productive old-growth forest. Of the productive old growth, 21,848 acres or 46 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,783 acres of high - volume, coarse-canopy old growth. The area also includes 111 acres of second growth where timber harvest has occurred in the past.

(d) Fish Resources: The streams and lakes in this area support pink, coho, chum, sockeye, and chinook salmon, steelhead and cutthroat trout, and Dolly Varden char. The major fish producing waters listed by the Anadromous Waters Catalogue include McDonald Lake, Wolverine Creek, Reflection Lake, and Short Creek.

(e) Wildlife Resources: This area has habitat for deer, brown and black bear, otter, beaver, marten, mink, loon, wolves, and common waterfowl. Mountain goats, mountain lions, and moose can also be found here. Trumpeter swans use the major saltwater inlets and freshwater lakes as resting areas during their migrations. Bald eagles, Canada geese, and arctic loons nest within the area. Marbled murrelets and northern goshawks can be found here, but no nests have been located (USDA Forest Service, 1997).

(5) Management Direction and Current Uses: This roadless area was allocated to seven different Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These seven LUDs are Transportation and Utility System (TUS), Semi-remote Recreation, Remote Recreation, Special Interest Area, Wild River, Scenic Viewshed, and Old-growth Habitat. The TUS LUD is a secondary LUD that overlays the other land uses.

LUD	Acres
Scenic Viewshed	939
Transportation and Utility System	NA
Semi-remote Recreation	72,167
Remote Recreation	29,645
Special Interest Area	3,494
Wild River	3,150
Old-growth Habitat	245

Approximately one percent of this roadless area (not including the LUD overlay) contains a development LUD Scenic Viewshed. This LUD is located on Black Island. The potential power transmission corridor that passes through this area was assigned to the Transportation and Utility System LUD overlay.

Approximately 99 percent of this area contains non-development LUDs (Semi-remote Recreation, Remote Recreation, Special Interest Area, Wild River, Old Growth Habitat). The Semi-remote Recreation LUD was assigned to approximately 66 percent of the roadless area. Approximately 27 percent of the area was allocated to

the Remote Recreation LUD. In the upper Bailey Bay area, approximately 3 percent of the roadless area was allocated to the Special Interest Area LUD. These acres are known as Bailey Bay Hot Springs Recreation Area and are considered to be exceptionally scenic. In the Wolverine Creek-Lake McDonald Wild River area, approximately 3 percent of the roadless area was allocated to the Wild River LUD. A small portion of Black Island was allocated to the Old-growth Habitat LUD, accounting for less than one percent of the roadless area.

Most of the current use in this area involves recreation activities along the coast and bay areas. There are five recreation use cabins and shelters within the area and trails to lakes in the Yes Bay and Short Bay areas. Private lodge at Yes Bay and on Bell Island cater to sport fishing, with clients also using the hiking trails. The lodge on Bell Island is currently inactive. Fourteen outfitter/guides operated in this roadless area in 2000. Outfitter/guide services in 2000 included freshwater fishing (164 service days), remote setting nature tours (43 service days), flight seeing tours (43 service days), and bear hunting (6 service days). Some subsistence use occurs in this area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that one VCU partially located in this area is a subsistence use area with a high sensitivity to disturbance. This area receives more personal use by residents of Ketchikan rather than subsistence use.

A power transmission corridor runs north through this area. The Forest Service has approved a Special Use Permit for Ketchikan Public Utilities to construct the Swan Lake-Lake Tyee Intertie Project, a 138-kV electric transmission line that would run through this corridor. Project construction clearing for the southern portion began in 2002.

There is an electronics site at Syble Point and several lighthouse or navigational aid reserves located in the area.

(6) Appearance (Apparent Naturalness): The majority of this area is unmodified and retains a natural appearance. Exceptions to this include the five recreation cabins, shelters, hiking trails, and small areas where beach logging has occurred in the past. The boundaries of the area all conform to natural terrain features. The area displays natural characteristics when viewed from nearby water travel routes and from inside the area itself.

(7) Surroundings (External Influences): Misty Fiords National Monument Wilderness borders part of the North Cleveland Roadless Area to the east. The Cleveland Roadless Area (#528), Frosty (#210), Anan Creek (#209), and Harding (#207) Roadless Areas border the area to the north, east, and west. The area is bordered to the south by saltwater. External influences in the area include boat traffic and aircraft flying overhead.

(8) Attractions and Features of Special Interest: The main attraction of this area is its remoteness and outstanding scenery. Excellent freshwater fishing also attracts people to the area. Areas of special interest include McDonald Lake, part of the Wolverine Creek-McDonald Lake Wild River area and Bailey Bay Hot Springs Recreation Area. McDonald Lake is of special interest because it has historically supported one of the largest sockeye runs in Southeast Alaska. Bailey Bay Hot Springs Recreation Area is known for exceptional scenery and has the highest surface temperature of any hot spring in Southeast Alaska. Bailey Bay Hot Springs is managed as a Special Interest Area. The area contains 21 inventoried recreation places, which cover 51,176 acres, or 47 percent of the roadless area.

(9) Differences between the 1989 and 2002 Roadless Area Boundary: The boundaries of this area changed in one main way between 1989 and 2002. The majority of Hassler Island was included in the 1989 area. This island is entirely excluded from the 2002 area due to recent timber management related development.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area has very high natural integrity and outstanding apparent naturalness. The boundaries all conform to natural terrain features and the area's physical features all tie together into one homogeneous unit. The area is bordered by large roadless areas and saltwater. The appearance of this area is highly suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The area provides very high opportunity for solitude and outstanding opportunity for primitive recreation. A person is not likely to encounter other people when camping in and using this roadless area

except possibly on the Lake McDonald, Shelokum Lake, or Reflection Lake trails. Bailey Bay Hot Springs Recreation Area has exceptional scenery and hot springs providing a variety of recreational opportunities.

There are five recreation use cabins located in the area and trails to lakes in the Yes Bay and Short Bay areas. A private lodge at Yes Bay caters to sport fishing, with clients also using the hiking trails. Fourteen outfitter/guides operated in this roadless area in 2000. Outfitter/guide services in 2000 included freshwater fishing (164 service days), remote setting nature tours (43 service days), flight seeing tours (43 service days), and bear hunting (6 service days).

Due to the vastness of the area, the high scenic quality, the abundance of saltwater and upland lake recreation attractions, and many trail opportunities, this area has outstanding opportunity for primitive recreation.

The area provides primarily primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	102,595	94%
Semi-Primitive Non-Motorized (SPNM)	2,952	3%
Semi-Primitive Motorized (SPM)	3,142	3%
Roaded Modified (RM)	70	0%
Rural (R)	686	1%

The area contains 21 inventoried recreation places, which cover 51,176 acres, or 47 percent of the roadless area.

ROS Class	# of Rec. Places	Total Acres
P	16	44,420
SPNM	3	2,952
SPM	1	3,118
RM	0	0
R	1	686

The Misty Fiords National Monument is adjacent to this roadless area, which has various recreation opportunities.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the North Cleveland Roadless Area was 23 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 26. This rating is more reflective of the relatively low effect that existing developments have on the attributes of the area and the fact that it is surrounded by roadless areas.

(4) Ecologic and Geologic Values: The North Cleveland Roadless Area is part of a much larger roadless land area that includes all of Cleveland Peninsula through the Misty-Fiords National Monument Wilderness Area and north through the Stikine Leconte Wilderness Area. The other eight roadless areas that comprise this larger area are Frosty (#210), Cleveland (#528), Anan (#209), Bradfield (#208), Harding (#207), Cone (#206), Aaron (#205), and Madan (#204).

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed three VCUs (724, 727, and 728 along Bell Arm and Yes Bay) as primary sportfish producers. No VCUs were listed as primary salmon producers although most of the area is listed as secondary salmon producers (ADF&G, 1998).

The streams and lakes in this area support pink, coho, chum, sockeye, and chinook salmon, steelhead and cutthroat trout, and Dolly Varden char. The major fish producing waters listed by the Anadromous Waters Catalogue include McDonald Lake, Wolverine Creek, Reflection Lake, and Short Creek. McDonald Lake supports all five species of salmon, plus steelhead and Dolly Varden char. McDonald Lake has historically supported one of the largest sockeye runs in Southeast Alaska. Wolverine Creek flows out of McDonald Lake into Yes Bay. The area is well known for fisheries and recreation. McDonald Lake and Wolverine Creek have a regionally significant fishery with a steelhead run that averages 50 fish per year, as well as five species of salmon, greyling, western brook lamprey, cutthroat and rainbow trout, and Dolly Varden char. ADF&G lists the area as one of the 65 "important" watersheds in Southeast Alaska for fisheries values (USDA Forest Service, 1997). The estimated annual peak escapement for Wolverine Creek is 15,400 pink salmon. This stream also has good coho smolt production values (ADF&G, 1998). Information from ADF&G escapement surveys shows that between 1992 and 1998, Wolverine Creek had an average peak escapement of 4,100 sockeye salmon. Walker Creek also has runs of all five species of salmon plus steelhead trout. Short Creek and Reflection Lake provide habitat for sockeye, coho, and pink salmon, steelhead trout and Dolly Varden char. Short Creek has an estimated annual peak escapement of 9,000 pink salmon (ADF&G, 1998). Reflection Lake has a coho run that is used as the brood stock for fish enhancement projects.

Recent fisheries enhancement has been accomplished by fertilizing McDonald Lake. The Swan Lake EIS (USDA Forest Service, 1997) identified enhancement projects implemented in 1995 providing fish passage to two barrier falls in the Woodpecker Creek drainage.

(b) Wildlife Resources: This area has habitat for deer, brown and black bear, otter, marten, mink, loon, wolves, and common waterfowl. Mountain goats and moose can also be found here. American peregrine falcons likely migrate through this area (USDA Forest Service, 1997). Trumpeter swans use the major saltwater inlets and freshwater lakes as resting areas during their migrations. Bald eagles nest within the area. Canada geese and arctic loons nest in the beaver ponds connected to McDonald Lake (USDA Forest Service, 1997). Marbled murrelets and northern goshawks can be found here, but no nests have been located (USDA Forest Service, 1997).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, eight sensitive plant species are known or suspected to occur in the Ketchikan Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are a few small glaciers near Reflection Lake. Bailey Bay Hot Springs at Lake Shelokum are of special geologic interest.

(5) Scientific and Educational Values: Bailey Bay Hot Springs and the small glaciers are special features of the area. There are no Research Natural Areas (RNAs) within this area. However, this area contains two of the potential RNAs identified in the 1997 Tongass Land Management Plan Revision FEIS. Bailey Bay Hot Springs and

McDonald Lake were identified as potential candidates for RNA designation but neither of these areas were ultimately considered suitable.

McDonald Lake has historically supported one of the largest sockeye runs in Southeast Alaska. Bailey Bay Hot Springs have the highest surface temperature of any hot spring in Southeast Alaska. Bailey Bay Hot Springs were not selected as an RNA because this designation would conflict with existing and potential recreation use of the area. It was instead designated as a Special Interest Area (Bailey Bay Hot Springs Recreation Area).

(6) Scenic Values: Most of this roadless area is part of the Coast Range Visual Character Type which is characterized by large massive landforms that commonly rise to elevations of about 7,000 feet, steep slopes or rock cliffs that plunge to saltwater, and deep, narrow saltwater fiords that protrude into this land mass. Mountain ridges are generally rounded with scattered jagged peaks rising above the surrounding rounded ridge tops. The North Cleveland Roadless Area does not have the massive landforms with the high elevations that are found through much of the Coast Range character type. It does, however, possess a high degree of diversity due to the variety of lake basins of all sizes, stream features, rock features, and vegetative patterns found in this area.

The majority of this area is unmodified and retains a natural appearance. Exceptions to this include the five recreation cabins, hiking trails, and small areas where beach logging has occurred in the past. The boundaries of the area all conform to natural terrain features. The area displays natural characteristics when viewed from nearby water travel routes and from inside the area the itself. Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include: Wolverine Creek/Lake McDonald (Recommended Wild, Scenic, and Recreational River); Yes Bay, Bailey Bay, Bell Arm, Behm Narrows, Short Bay, and Anchor Pass (Saltwater Use Areas); McDonald Lake cabin and shelter, Anchor Pass, and Reflection Lake (Public Recreation Cabins); Yes Bay and Bell Island (Private Resorts); and the Bell Island, Bailey Bay-Shelokum Lake, Reflections Lake, and McDonald Lake trails (Hiking Trails).

About 60 percent of this area was inventoried as Variety Class B (possessing landscape characteristics that are common for the character type). Approximately 39 percent was rated as Variety Class A (possessing landscape diversity that is unique for the character type). Approximately 99 percent of this roadless area is in a Type I Existing Visual Condition (EVC), where the natural landscape has remained unaltered by human activity.

(7) Social, Cultural, and Historical Values: A number of prehistoric and historic sites have been identified through archaeological surveys, oral history and historic documents. The interior of this area has seen little influence of human activity. Some coastal locations were occupied by prehistoric and historic Native cultures. Goldschmidt and Haas (1946) identified former smokehouse/cabin locations adjacent to Yes and Short Bays, as well as a former village adjacent to Yes Bay. They also identified fishing at the mouth of Yes Bay. Several of the bays and islands were used by early commercial fishing interests and, in recent times, commercial recreation (lodges on Bell Island and in Yes Bay) and individual recreation users. These land uses are closely tied to the excellent salmon fishing in the adjacent saltwater and streams. A cannery and related historic uses occurred at Yes Bay, including an early headquarters of the Tongass National Forest.

Most of the current use in this area involves recreation activities along the coast and bay areas. There are five recreation use cabins within the area and trails to lakes in the Yes Bay and Short Bay areas. Private lodges at Yes Bay and on Bell Island cater to sportfishing, with clients also using the hiking trails. Fourteen outfitter/guides operate in this roadless area. Outfitter/guide services in 2000 included freshwater fishing (164 service days), remote setting nature tours (43 service days), flight seeing tours (43 service days), and bear hunting (6 service days). Limited subsistence use occurs in this area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed one VCU partially located in this area (VCU 735, Bell Island) among the VCUs with the highest sensitivity to disturbance of subsistence use areas. However, none of the VCUs in this area were included among the highest, second or third groups of highest community use values (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The boundaries of the area follow natural features on all sides and the area could easily be managed for wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: The long-term recreation potential of the area centers on continued management of the cabin system, Bailey Bay Hot Springs Recreation Area, and additional trails for dispersed recreation activity. There is some potential for additional mooring buoys in the popular bays. The bay areas have potential for fishing lodges.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: ADF&G, in cooperation with the Forest Service, maintains a fisheries fertilization project at Lake McDonald (USDA Forest Service, 1997). The landowner at Bell Island has proposed a fishpass.

(4) Wildlife Resources: No wildlife enhancement projects are planned for this roadless area.

(5) Timber Resources: There are 47,348 acres mapped as productive old growth and 111 acres of second growth in the roadless area. Of these acres, 14,881 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 199 acres or less than one percent of this roadless area are estimated to be suitable for timber production. Approximately 15 of the suitable acres are mapped as high-volume old growth; of these acres, none are mapped as high-volume, coarse-canopy old growth.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: No mining claims are located within this roadless area and there, is low potential for mineral development. This area contains an estimated 5,202 acres of undiscovered locatable mineral resources (Brew et al 1990; USDA Forest Service, 1991); 3,584 of these acres are considered to have high potential for development.

(8) Transportation and Utilities: An approved power transmission corridor runs north through this area. The Swan Lake-Lake Tyee Intertie, a 138-kV electric transmission line, will run through this corridor. The Forest Service has approved a Special Use Permit for this project and construction began in 2002.

The State and Southeast Conference also identified a potential transportation corridor from Spacious Bay north to Santa Anna Inlet for long-term needs.

(9) Water Availability and Use: There are no existing or planned hydroelectric or domestic water projects within this roadless area.

(10) Areas of Scientific Interest: There are no RNAs located in this area. However, this area contains two areas that were considered for RNA status in the Research Natural Areas Steering Committee's planning process. Neither of these areas were ultimately considered suitable for RNA designation. One of the areas was subsequently designated as a Special Interest Area (Bailey Bay Hot Springs Recreation Area).

(11) Land Use Authorizations: There is an electronics site at Syble Point and several lighthouse or navigational aid reserves. The Forest service has approved a Special Use Permit for Ketchikan Public Utilities to construct the Swan Lake-Lake Tyee Intertie Project, a 138-kV electric transmission line that would pass through this area. This project began construction in 2002. Outfitter and guide permitting is ongoing and expected to continue.

(12) Land Status: All land within the roadless area is part of the National Forest System. Encumbered lands within the roadless area are located around Eagle River and Lake.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives significant local use for hunting, fishing and recreation activity.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the North Cleveland Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. It also identified two drainages for protection as Wild and Scenic Rivers.

(c) Public Input During Forest Plan Revision and Appeals: Parts of this area were specifically addressed in public input received during the Forest Plan revision and appeal. In addition, many general comments were received with respect to the southern end of Cleveland Peninsula, which borders the area to the west. Most comments regarding the Cleveland Peninsula asked for either no future logging, a deferral of logging plans, or less intensive logging than planned. Specific areas in the North Cleveland Roadless Area that were identified in comments included Bailey and Short Bays, Anchor Pass, and Bell Island. Commenters requested that the roadless recreation values (hunting, fishing, and scenery) of Bailey and Short Bays be protected. Other commenters requested that there be no logging on Bell Island. Anchor Pass, which borders Bell Island to the east, was identified by another commenter as an area where logging should not be permitted.

The Cleveland Peninsula was also identified in a number of appeals.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: Part of this area was included in the study area for the Swan Lake-Lake Tyee Intertie Project FEIS (USDA Forest Service, 1997). Public comments on this document that included reference to roads in the North Cleveland Roadless Area included the following. Native Councils opposed road construction in the Yes Bay because of their effect on fisheries and land animals and because they would encourage members of the public to compete with them for subsistence resources. Other local governments support access roads.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as one of the 13 roadless areas they considered to have outstanding fish and wildlife values. They commented that along with three other roadless areas that form the Cleveland Peninsula, it serves as a corridor for many mainland species to colonize the archipelago of Southeast Alaska. The Peninsula is thought to serve as an important source of natural colonization of the southern and central islands of the Alexander Archipelago by mainland species such as moose and wolves. This is largely because the peninsula penetrates the archipelago much further than any other mainland peninsula in southeast Alaska. They indicated that the important wildlife values provided by this area warrant management that ensures the long-term integrity of its habitats, ecosystem processes, and ecological functions.

In comments relative to the 1997 Forest Plan, the Governor of Alaska recommended that logging and construction of logging roads be avoided in important public interest areas such as the Cleveland Peninsula (most of RA# 528, 529, 209, and 210). This comment was reiterated by the Governor in scoping comments regarding the SEIS and in comments by the Division of Governmental Coordination on the Draft SEIS.

Alaska Department of Fish and Game recommended permanent roadless status for the Cleveland Peninsula in their comments on the Draft SEIS.

The Alaska Department of Fish and Game rated the Cleveland and North Cleveland roadless areas (VCUs 719, 710, 717, 718, 720, 721, 722, and 723) as the highest priorities for protection in the Ketchikan Area (outside of POW Island). This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The Department of Transportation and Public Facilities noted that there is a corridor across Cleveland Peninsula that might cross a small portion of this roadless area; it is identified in the Southeast Alaska Transportation Plan under Long Term Actions and was not included in the SEIS. They commented that this corridor is for a proposed highway that would link new ferry terminals on Spacious Bay and Santa Anna Inlet and would be a component of the Inside Passage Highway.

The city of Petersburg said they were opposed to designation of this area as wilderness because of the potential long-term economic impacts on the city.

SEACC identified the Anan roadless area as part of the Cleveland Peninsula, which includes Roadless Areas 209, 210, 528, and 529. They recommend this entire area, a 200,000-acre arm of the mainland, as LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 204, 205, 206, 207, 208, 209, 210, 528, and 529 as a contiguous complex of roadless areas that should be considered one roadless area and recommended it for permanent protection as LUD II. The Tongass Conservation Society recommends North Cleveland roadless area for long-term protection from logging and development.

Many individual commenters identified the Cleveland Peninsula as an area in need of protection. Some individuals recommended this area for permanent protection as wilderness.

(2) Nearby Roadless and Wilderness Areas and Uses: Misty Fiords National Monument Wilderness borders part of the North Cleveland Roadless Area to the east. South Etolin Island Wilderness is located approximately 8 miles west of the area. The Cleveland Roadless Area (#528) borders the area to the west. The Frosty Roadless Area (#210) borders the area to the north and west. The Anan Creek (#209) and Harding (#207) Roadless Areas border the area to the north. The North Revilla Roadless Area (#526) is located south across Behm Narrows from the area.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	185	265
Ketchikan (Pop. 14,070)	25	30
Wrangell (Pop.2,308)	35	135
Petersburg (Pop. 3,324)	70	145

(4) Relative Contribution to the National Wilderness Preservation System: The North Cleveland Roadless Area is located north of Revillagigedo (Revilla) Island. The area includes part of the Cleveland Peninsula on the mainland and a number of islands in Behm Canal, including Bell and Black Islands. Behm Arm and Behm Narrows border the area to the south. The area is bordered on the east by the Misty Fiords National Monument Wilderness and the Harding Roadless Area (#207). The Cleveland (#528), Frosty (#210), and Anan (#209) Roadless Areas border the area to the west and north. The area is characterized by very rugged terrain. The steep mountain slopes cause deeply incised drainages. There are large lakes at the headwaters of the larger streams and numerous smaller lakes in most drainages. There are a few small glaciers. Elevations range from sea level to 4,000 feet. The major islands in Behm Canal are less rugged than the mainland, but are characterized by steep slopes starting at saltwater and ranging to 3,000 feet.

The area is mostly unmodified and natural appearing. The natural integrity of the area is very high and the apparent naturalness is outstanding. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

The area has relatively high scenic quality; approximately 39 percent of the landscape is considered distinctive for the character type from a scenery standpoint. Features of special interest in the area include Bailey Bay Hot Springs Special Interest Area, and McDonald Lake, which is known for its very high production of sockeye salmon. The area has some small glaciers near Reflection Lake and additional hot springs near Lake Shelokum. A special value of the North Cleveland Roadless Area is that it lies within a much larger mainland, roadless area that includes all adjacent areas and extends from the southern tip of Southeast Alaska to Skagway. As such, it contributes to one of the largest roadless land areas in the temperate region of North America.

The roadless area includes about 21,848 acres of high-volume, old-growth forest. Of these acres, approximately 1,783 are mapped as high-volume, coarse-canopy old growth.

The North Cleveland Roadless Area is classified as being in the Revilla Island/Cleveland Peninsula Biogeographic Province and makes up about 8 percent of the province. It is one of 12 inventoried roadless areas found within the province which make up about 60 percent of the province. Part of the Misty Fiords National Monument Wilderness is located in this province and makes up about 18 percent of the province. The province also includes two Congressionally designated LUD II areas (Naha and Anan) which make up about 5 percent of the province.

The Cleveland Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents 4 percent of the ecological section. Approximately 20 percent of the Inside Passage Fjordlands Ecological Section is in existing wilderness, 2 percent is in existing LUD II, and 30 percent is protected by other existing non-development LUDs.

The vast majority (96 percent) of the roadless area is in the Bell Island Granitics Ecological Subsection. This portion of the roadless area represents 32 percent of the entire ecological subsection, 14 percent of which is in existing wilderness, 9 percent in LUD II, and 57 percent in other existing non-development LUDs. The balance (4 percent) of the roadless area is in the Zimovia Strait Complex Ecological Subsection; this portion represents 2 percent of the entire ecological subsection, 5 percent of which is protected in existing wilderness and 26 percent in other existing non-development LUDs.

The North Cleveland Roadless Area was rated 26 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 5th from the highest (along with six other roadless areas) among the 109 Tongass inventoried roadless areas.

There is considerable local and national support for managing this area in an unroaded condition, and some support for designation of this area as wilderness. Designation would create a large wilderness that would contribute to an even larger area of roadless lands along the Canadian border that could stretch from Hyder to Skagway. The Bailey Bay Hot Springs and the hot springs near Lake Shelokum would be included. A power transmission that is part of the planned power grid for Southeast Alaska has been approved and permitted for construction which began in 2002. It follows a route from Bell Arm in the southeast of the area, north to Eagle Lake and down Eagle River to the Tyee power system on the Bradfield Canal. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be high to very high.

V. Environmental Consequences

The North Cleveland Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 99 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 1 percent of the roadless area. The land in the development LUDs includes an estimated 199 acres that are suitable for timber production (less than 1 percent of the suitable acres on the Ketchikan/Misty Fiords Ranger District). None of the suitable acres are identified as high-volume, coarse-canopy old growth. This area contains 5,202 acres of undiscovered locatable mineral resources; 3,584 of the acres are considered to have high potential for development. The recreation, minerals, and special use programs would continue. Timber harvest planning in the area would continue. The values associated with the natural settings of the roadless area are mostly protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, special uses, and minerals programs would continue similar to current conditions. No timber harvest would be allowed.

The values associated with the natural settings of the roadless area, including the high scenic, ecologic, and commercial recreation values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. No timber harvest would be allowed. The ongoing recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the high scenic, ecologic, and commercial recreation values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 529 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								109,639
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area	3,494	3,494	3,494	3,494	3,494		3,494	
Remote Recreation	29,645	29,645	29,645	29,645	29,645		29,645	
Enacted Municipal Watershed								
Old-growth Habitat	245	245	245	245	245		245	
Semi-remote Recreation	72,167	72,167	72,167	72,167	72,167		72,167	
Recommended LUD II						109,639		
LUD II								
Wild, Scenic, Recreational River	3,150	3,150	3,150	3,150	3,150		3,150	
Experimental Forest								
Scenic Viewshed	939	939	939	939	939		939	
Modified Landscape								
Timber production								
TOTAL	**109,639**	**109,639**	**109,639**	**109,639**	**109,639**	**109,639**	**109,639**	**109,639**
Suitable Timber Lands	199	199	199	199	199	0	199	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Hyder (530)

ACRES (NFS): 116,304

BIOGEOGRAPHIC PROVINCE: North Misty Fiords and Ice Fields

ECOLOGICAL SECTION: Boundary Ranges

2003 WILDERNESS ATTRIBUTE RATING: 25

I. Overview and Description

(1) Location and Access: This area located on the mainland, is bordered to the west by Misty Fiords National Monument Wilderness. Portland Canal, the Canadian Border, and the community of Hyder, Alaska border the area to the east. The Canadian Border also forms the north boundary of the area. Hyder, adjacent to the east side of the area, is located 2 miles west of Stewart, British Columbia and is the only community in southern Southeast Alaska that is accessible by road. Ketchikan, which is on the Alaska Marine Highway and has regularly scheduled air service, is located approximately 50 miles southwest of the area.

Access to the Hyder Roadless Area is by boat, floatplane, snowmobile, foot, or helicopter. Planes could land on No Name Lake. Access to the edges of the area is possible via the Salmon River Highway, which extends along the east shore of the Salmon River into the area then back to Canada. A road was built up the Texas Creek drainage in the past, but been closed by flood damage for many years. The Titan Trail branches north into the area from this road. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes

(2) History: The area has a rich history of mining activity. It is for this reason that this roadless area was not made a part of Misty Fiords National Monument Wilderness.

(3) Geography and Topography: The area is extremely rugged and rises from saltwater to elevations over 7,000 feet. Glaciers cover large parts of the area. Several medium-sized rivers flow through the area or originate within it. There are 14 miles of saltwater shoreline and 6 islands or islets totaling approximately one acre in this area. The area includes approximately 6,998 acres of alpine, 27,721 acres of snow and ice, and 35,950 acres of rock. There are 375 acres of freshwater lakes.

(4) Ecosystem:

(a) Classification: Biogeographic Province. This area is within the North Misty Fiords and Ice Fields Biogeographic Provinces. The North Misty Fiords province includes 57 percent of the roadless area and has considerable topographic relief and a cool climate with many glaciers. Vegetation occurs in long, narrow strips along the valleys and lower slopes of the fiords. Much of the vegetation is muskeg, with cottonwoods in some river bottoms and subalpine fir along the Canadian border. The Ice Fields province includes 43 percent of the roadless area and is dominated by permanent ice fields, glaciers and mountain peaks between glaciers.

Ecological Section/Subsection. The Hyder Roadless Area is contained entirely within the Boundary Ranges Ecological Section (M247B), Boundary Ranges Icefields Ecological Subsection (see table below). A northwest-southeast trending batholith of resistant granite and granodiorite underlies this portion of the Coast Mountains. It consists of a discontinuous mix of icefields and glaciers separated by river valleys and pierced by nunataks and scree fields. Forests comprise a minor part of the vegetation along coasts and rivers.

Ecological Section	Ecological Subsection	Percent of Roadless Area
Boundary Ranges	Boundary Ranges Icefields	100%

(b) Soils: The soils in this area are moderately-deep loam with inclusions of glacial till and moraine deposits.

(c) Vegetation: Alpine vegetation (6,998 acres mapped in the area) dominates elevations above 2,500 feet. Below that elevation the steep mountainsides are heavily marked with snow and landslide paths that are typically covered with grass, alder, and brush. Cottonwood trees may be occasionally found along valley bottoms and floodplains as well as spruce, hemlock, fir, and dogwood. There are no muskegs mapped within the roadless area however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 26,625 acres mapped as forestland, of which 11,135 acres, or 42 percent, are mapped as productive old-growth forest. Of the productive old growth, 4,855 acres, or 44 percent, are mapped as high-volume old-growth forest. The productive old growth includes about 1,324 acres of high-volume, coarse-canopy old growth. There is no second growth in the area.

(d) Fish Resources: The streams in this area provide habitat for coho, pink, and chum salmon. The major fish-bearing streams are Fish Creek, Soule River, Salmon River, Marx Creek, and Texas Creek.

(e) Wildlife Resources: A small population of mountain goats range over the area, as do wolves, black and brown bear. Sitka black-tailed deer do not inhabit this area.

(5) Management Direction and Current Uses: This roadless area was allocated to three different Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These three LUDs are Scenic Viewshed, Remote Recreation, and Semi-remote Recreation.

LUD	Acres
Scenic Viewshed	1,264
Remote Recreation	67,739
Semi-remote Recreation	47,301

This area contains one development LUD (Scenic Viewshed). Approximately 1 percent of the roadless area was allocated to the Scenic Viewshed LUD.

The majority of this area, approximately 99 percent, was allocated to a non-development LUD (Remote Recreation, Semi-remote Recreation). Approximately 58 percent of the roadless area was allocated to the Remote Recreation LUD. The Semi-remote Recreation LUD accounts for approximately 41 percent of the roadless area.

Present recreation levels within this roadless area are low. Recreation activities take place along the shoreline, Soule River, and No-Name Lake. Some snowmobile use occurs in the higher elevations on the glaciers or ice field. There was no outfitter/guide use reported in this area in 2000. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that the four VCUs located within this area are typically not used for subsistence purposes.

(6) Appearance (Apparent Naturalness): This area generally appears unmodified and in a natural condition. The area does, however, include a number of private mineral tracts along the Salmon River. In addition, the Salmon River Highway extends along the east shore of the Salmon River into Canada. This road is excluded from the roadless area but affects the apparent naturalness of adjacent lands that are within the area. The Titan Trail branches north into the area from the Salmon River Highway near the old Texas Creek Road. The unmodified landscape dominates when this roadless area is viewed from nearby Visual Priority Routes and Use Areas.

(7) Surroundings (External Influences): This area is contiguous to Misty Fiords National Monument Wilderness. There are numerous private tracts of land along the Salmon River adjacent to the roadless area.

Helicopters associated with mining operations in Canada fly over and near the area. Aircraft flying to and from Hyder fly over and near the area, and may cause temporary distractions to visitors. Otherwise, this area is surrounded by extremely remote areas. Hyder is located 2 miles west of Stewart, British Columbia and is the only community in southern Southeast Alaska that is accessible by road. The Salmon River Highway extends into the area and essentially divides it into two parts.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, and the opportunity to see wildlife and to study the processes that formed this landscape are all attractions. The opportunity to view glaciers and the vast expanse of the Salmon River Valley are special features of the area. The area contains six inventoried recreation places, which cover 20,491 acres, or 18 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The main external boundaries of this roadless area didn't change between 1989 and 2002. The area north of Hyder and between the highway to Stewart and the Canadian boundary is relatively small and isolated from the remainder of the roadless area, has been dropped from the roadless area between the Draft and Final SEIS.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is virtually unmodified, and surrounded by vast areas of designated wilderness and other undeveloped lands. However, the community of Hyder borders the area to the east and Stewart, British Columbia is located 2 miles to the east. A road extends along the east shore of the Salmon River and continues into Canada. This road corridor, which is excluded from the roadless area, essentially divides the area into two sections and affects the natural integrity and apparent naturalness of adjacent lands that are within the area. There are also a number of non-National Forest System inholdings in this area. The Titan Trail branches north into the area from the Salmon River Highway. Overall, the appearance of the majority of the area appears suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The area provides very high opportunity for solitude and outstanding opportunity for primitive recreation. Aircraft traveling to and from Hyder occasionally pass over the roadless area and may be observed by people in it. Present recreation levels are low. Generally, a person camped or traveling inland is unlikely to see others.

The character of the landforms generally allows the visitor to feel remote from sights and sounds of human activity. The area is accessible by boating along the shoreline, long hikes over difficult terrain, or by helicopter. Access to the edges of the area is possible via the Portland Canal and the Salmon River Highway. The Titan Trail branches north into the area from this road. The rough terrain offers a high degree of physical challenge. The presence of both black and brown bears also presents a degree of challenge and a need for woods skills and experience. There are several beaches along the shoreline that people enjoy using for picnics or camping.

Many of the recreation places in the area are associated with old mining roads or trails that offer opportunities for improved recreation trails.

The area provides primarily primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	98,246	84%
Semi-Primitive Non-Motorized (SPNM)	1,772	2%
Semi-Primitive Motorized (SPM)	7,613	7%
Roaded Natural (RN)	6,956	6%
Roaded Modified (RM)	1,605	1%

The area contains six inventoried recreation places, which cover 20,491 acres, or 18 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	2	8,648
SPNM	1	1,283
SPM	1	2,020
RN	2	6,956
RM	2	1,584

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

The Misty Fiords National Monument is adjacent to this roadless area, which has various recreation opportunities.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Hyder Roadless Area Roadless Area was 23 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 25. This rating better reflects the potential effects of the Texas Creek Road which has been closed for many years and the excellent opportunities to have solitude and primitive experiences due to the large size of the area and adjacent undeveloped lands.

(4) Ecologic and Geologic Values: The Hyder Roadless Area lies within a much larger mainland, unroaded land area that includes all adjacent areas and extends from the southern tip of Southeast Alaska to Skagway.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed VCU 806 along West Fork Texas Creek and Salmon River as a primary salmon and sportfish producer. One VCU was considered a non-producer and the others were secondary producers of salmon (ADF&G, 1998).

The streams in this area provide habitat for coho, pink and chum salmon. The major fish-bearing streams are Fish Creek, Soule River, Salmon River, Marx Creek, and Texas Creek.

Fish Creek, a tributary of the Salmon River, has an estimated annual peak escapement of 25,800 pink salmon and excellent coho salmon capability (ADF&G, 1998). Fish Creek also has the largest recorded genetic strain of chum salmon in North America (USDA Forest Service, 1997). These fish are listed as Regional Forester Sensitive Species. Reportedly, Fish Creek had an escapement of 60,000 chum salmon in 1993. A spawning habitat enhancement project for chum is located on Marx Creek.

(b) Wildlife Resources: A small population of mountain goats range over the area, as do wolves, black and brown bear,. Sitka black-tailed deer do not inhabit this area.

(c) Threatened, Endangered, and Sensitive Species. The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Five Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the Fish Creek chum salmon, trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish,

ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, eight sensitive plant species are known or suspected to occur in the Misty Fiords Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. Glaciers cover large parts of the area, including the Through, Soule, Red, Gray, and Thumb Glaciers.

(5) Scientific and Educational Values: Opportunities to observe and study fish and wildlife and the various forces that formed these mountains are several of the attractions of this area. Several alpine glaciers can be viewed in this area. There are no Research Natural Areas (RNAs) in the area.

(6) Scenic Values: The Hyder Roadless Area is part of the Coast Range visual character type, which is characterized by large, massive landforms with upland elevations averaging 5,000 to 7,000 feet dissected by steep-walled U-shaped valleys. Although ridges are generally rounded, sharp, jagged peaks occasionally rise up to 9,000 feet. On the west side of this character type, narrow saltwater fiords often bounded by steep rock faces protrude into the terrain. Glaciers and ice fields are prominent in the interior of this character type. This roadless area is generally representative of the interior portions of this character type.

The unmodified landscape dominates when this roadless area is viewed from nearby Visual Priority Routes and Use Areas. Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include: Portland Canal, Salmon River Highway-Hyder (Public Use Road); Hyder (Community); and Titan Trail (Hyder) (Hiking Trail).

Almost the entire area, 99 percent, is inventoried as a Variety Class B, possessing characteristics that are common to the character type. Approximately 95 percent of the area is inventoried in a Type I Existing Visual Condition, where landscape seems unmodified by has humans. Approximately four percent are inventoried in EVC III, in which the average person notices changes in the landscape, but they do not attract significant attention. Except for scattered evidence of past mining activity, the overall landscape has remained unaltered by human activity.

(7) Social, Cultural, and Historical Values: The area has a rich history of mining activity and related developments. It is for this reason that this roadless area was not made a part of Misty Fiords National Monument Wilderness. The Tongass Fish and Wildlife Resource Assessment indicated that the four VCUs located within this area are typically not used for subsistence purposes. One of the four VCUs that comprise this area (VCU 806 along West Fork Texas Creek and Salmon River) was included among the VSUs with highest community use values. None were listed in the second or third most important groups and none were listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The Salmon River Highway continues into Canada and separates a relatively small portion of the roadless area from the larger portion to the west, which has been dropped from the roadless area. There are also a number of non-National Forest System inholdings in this area, mainly located east of the road corridor. Otherwise, the boundaries of the Hyder Roadless Area are generally well defined by topographic features. The feasibility of managing the west portion of the area in a roadless condition is excellent.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: The potential exists for additional outfitter and guide permits, cabins and shelters, a trail to No Name Lake, and for the reopening of historic mining trails.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: A spawning habitat enhancement project for chum is located on Marx Creek. The Forest Service has discussed developing off-channel improvements within the Salmon River corridor to enhance spawning habitat (USDA Forest Service, 1997).

(4) Wildlife Resources: No wildlife enhancement projects are planned for this roadless area. The Fish Creek Wildlife Observation Site was re-constructed in 2001 is located outside the roadless area.

(5) Timber Resources: There are 11,135 acres of productive old growth and no second growth due to harvest mapped in the roadless area. Of these acres, 4,295 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 54 acres or less one percent of this roadless area are estimated to be suitable for timber production. Approximately 51 of the suitable acres are mapped as high-volume old growth; of these acres, 15 are mapped as high-volume, coarse-canopy old growth.

Due to steep terrain and low timber volume, the potential for managing timber in this roadless area is limited.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present; there are no known epidemic disease occurrences.

(7) Minerals: There are many patented and unpatented mining claims in the Fish Creek and Salmon River drainages. This area contains 20,976 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). In addition, this area contains 23,196 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991), all of which are considered to have high to moderate potential for development.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area. A Special Use Permit has been issued to the Alaska Department of Transportation and Public Utilities to maintain 9 miles of road right-of-way, from the south edge of Section 25, T.68S, R99E (CRM) to the Canadian Border.

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a demand for water in this area. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: There are no areas of scientific interest in this area.

(11) Land Use Authorizations: Westmin Resources has a Special Use Authorization for a power line along the Salmon River Highway near the roadless area.

(12) Land Status: All land within the roadless area is part of the National Forest System. The State has selected 160 acres of land at Fish Creek and this application is still pending as of 2001.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Most of the area is used by local residents for trapping, subsistence and recreation.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Hyder Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition. The Salmon River was identified for protection as a Wild and Scenic River.

(c) Public Input During Forest Plan Revision and Appeals: This area was not specifically addressed in public input received during the Forest Plan revision. However, one commenter requested that there be no logging at Hyder.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area is not within the study area of any recently completed project-level EISs.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as having important fish and wildlife habitat and populations; although not a top priority for protection, it ranked in their top third among all roadless areas. They indicated that protection of this area would conserve valuable remaining undisturbed forested habitats on the mainland.

The Alaska Department of Fish and Game rated the Hyder roadless area as the seventh highest priority for protection in the Ketchikan Area (outside of POW Island). This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

SEACC recommended the Hyder area should be designated as LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 309 for permanent protection as LUD II.

Others recommended the area for LUD II because of its spectacular scenery and importance for salmon, tourism, and recreation.

(2) Nearby Roadless and Wilderness Areas and Uses: The area is bordered to the west by the Misty Fiords National Monument Wilderness.

(3) Distance From Population Centers (Accessibility):

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	220	340
Ketchikan (Pop. 14,070)	50	145
Wrangell (Pop.2,308)	80	250
Petersburg (Pop. 3,324)	115	280

(4) Relative Contribution to the National Wilderness Preservation System: The Hyder Roadless Area, located on the mainland, is bordered to the west by Misty Fiords National Monument Wilderness. Portland Canal, the Canadian Border, and the community of Hyder, Alaska border the area to the east. The Canadian Border also forms the north boundary of the area. The area is extremely rugged and rises from saltwater to elevations over 7,000 feet. Glaciers cover large parts of the area. Several medium-sized rivers flow through the area or originate within it.

The area is mostly unmodified and natural appearing. One exception is an old road corridor up the Texas Creek drainage which has mostly recovered itself. The natural integrity and apparent naturalness is very high within the roadless area. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

The area has moderate to high scenic quality; none of the landscape is considered distinctive from a scenery standpoint. The area has a rich history of mining activity and related developments. It is for this reason that this roadless area was not made a part of Misty Fiords National Monument Wilderness. A special value of the Hyder Roadless Area is that it lies within a much larger mainland, roadless area that includes all adjacent areas and extends from the southern tip of Southeast Alaska to Skagway. As such, it contributes to one of the largest unroaded land areas in the temperate region of North America. Glaciers cover large parts of the area, including Through, Soule,

Red, Gray, and Thumb Glaciers. Fish Creek, a tributary of the Salmon River, has the largest recorded genetic strain of chum salmon in North America.

The roadless area includes about 4,855 acres of high-volume, old-growth forest. Of these acres, approximately 1,324 are mapped as high-volume, coarse-canopy old growth.

The Hyder Roadless Area is classified as being in the North Misty Fiords and Ice Fields Biogeographic Provinces. Approximately 57 percent of the roadless area is in the North Misty Fiords and makes up about 7 percent of that province. It is one of three inventoried roadless areas found within the province and that make up about 17 percent of the province. Much of the Misty Fiords National Monument Wilderness is located in this province and makes up about 82 percent of the province. The remaining 43 percent of the Hyder Roadless Area is in the Ice Fields Province and makes up about 2 of that province. It is one of nine inventoried roadless areas found in the province that make up about 67 percent of the province. Portions of the Tracy Arm-Fords Terror, Stikine-LeConte, and Misty Fiords National Monument Wilderness lie within the Ice Fields Province and make up about 33 percent of the province.

The Hyder Roadless Area lies completely within the Boundary Ranges Ecological Section and represents 3 percent of the ecological section. This ecological section is well represented by existing wilderness (33 percent) and by other existing non-development LUDs (62 percent, including 1 percent in LUD II).

The whole (100 percent) roadless area is within the Boundary Ranges Icefields Ecological Subsection; this portion represents 3 percent of the entire ecological subsection. Approximately 32 percent of this ecological subsection is in existing wilderness, an additional 1 percent is in existing LUD II, and an additional 62 percent is protected by other existing non-development LUDs.

The Hyder Roadless Area was rated 25 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 12th from the highest (along with 12 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is considerable local and national support for managing this area in an unroaded condition, but little support for designation as wilderness. Designation would create a relatively large addition to the Misty Fiords National Monument Wilderness with additional glaciers, the chum salmon in Fish Creek, and numerous mining claims and ongoing minerals interest. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be high.

V. Environmental Consequences

The Hyder Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 99 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 1 percent of the roadless area. The land in the development LUDs includes an estimated 54 acres that are suitable for timber production. Approximately 15 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 20,976 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains 23,196 acres of undiscovered locatable mineral resources; all of which are considered to have high to moderate potential for development. The recreation, minerals, and special use programs would continue. Timber harvest planning in the area would continue. The values associated with the natural settings of the roadless area are protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II LUD. The ongoing recreation, special uses, and minerals programs would continue similar to current conditions. No timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the high scenic and geologic values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. No timber harvest would be allowed and the ongoing recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by

Congress. The values associated with the natural settings of the roadless area, including the high scenic and geologic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 530 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								116,304
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation	67,739	67,739	67,739	67,739	67,739		67,739	
Enacted Municipal Watershed								
Old-growth Habitat								
Semi-remote Recreation	47,301	47,301	47,301	47,301	47,301		47,301	
Recommended LUD II						116,304		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	1,264	1,264	1,264	1,264	1,264		1,264	
Modified Landscape								
Timber production								
TOTAL	**116,304**	**116,304**	**116,304**	**116,304**	**116,304**	**116,304**	**116,304**	**116,304**
Suitable Timber Lands	54	54	54	54	54	0	54	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Nutkwa (531)

ACRES (NFS): 56,818

BIOGEOGRAPHIC PROVINCE: South Prince of Wales

ECOLOGICAL SECTION: Prince of Wales Mountains

2003 WILDERNESS ATTRIBUTE RATING: 23

I. Overview and Description

(1) Location and Access: The Nutkwa Roadless Area is located on the southwest corner of Prince of Wales Island, northeast of the South Prince of Wales Wilderness. It is approximately 30 air miles southwest of Ketchikan while Hollis, the closest community on the Alaska Marine Highway, is approximately 20 miles to the north. The Eudora Roadless Area (507) is northeast of the Nutkwa Roadless Area. Cordova Bay lies to the southwest and Haida Native Corporation lands lie to west. Access to Keete, Hassiah, and Kassa Inlets and Mabel Bay is by boat or floatplane. Floatplanes can also land in Nutkwa Lagoon, Lake Josephine, and Summit Lake. Access away from water is by foot or helicopter.

(2) History: South Prince of Wales Island was inhabited by the Tlingit until the Haida, who migrated north from the Queen Charlotte Islands, displaced them in the early 1700s. Since then, the roadless area has been within the principal traditional-use area of the Haida. Prior to use by the Haida culture, there is evidence that there was considerable prehistoric use of coast sites. In recent years, land northwest of the current roadless area has been conveyed to the Haida and two small parcels along Kassa Inlet have been conveyed to the State. The Nutkwa Roadless Area has always been considered a remote area of Prince of Wales Island. The major sounds and bays provide bases for commercial fishing including anchorages, fish processing facilities, and fish buying stations. Since the early 1900s, there has been an interest in the mineral resources. As a result, there are two patented mining claims and several unpatented claims that are currently active.

(3) Geography and Topography: The Nutkwa Roadless Area is located on the southwest corner of Prince of Wales Island, northeast of the South Prince of Wales Wilderness. There are 1,050 acres of alpine, 1,669 acres of rock, and 82 miles of shoreline on saltwater. There are a number of large and small freshwater lakes that total 1,074 surface acres. The area also includes 119 islands and islets (6 of these are greater than 10 acres) totaling 762 acres.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The roadless area is in the South Prince of Wales Island Biogeographic Province. The climate is warm and wet; deep snow is rare or highly transient depending on elevation. The topography is steep and rugged and the coastline is highly dissected. The vegetation in this province is strongly influenced by southwesterly storms.

Ecological Section/Subsection. The Nutkwa Roadless Area is contained entirely within the Prince of Wales Mountains Ecological Section (M247I), represented by two ecological subsections (see table below). Terrain in the Hetta Inlet Metasediments Ecological Subsection (84% of the roadless area) rises from deep fjords to sedimentary and volcanic peaks over 3,000 feet in elevation. The steep slopes are prone to frequent landslides. Soils in the lowlands, lying over poorly drained glacial till, support wetlands. Productive forests are rare in the Hetta Inlet Metasediments Ecological Subsection. Found along the eastern edge of the Nutkwa Roadless Area, the Moira Sound Complex Ecological Subsection (16% of the roadless area) is a deeply dissected landscape of sedimentary and volcanic bedrock carved in to fjords and

broad valleys. Bogs and wetlands are common on the poorly drained colluvial soils. Hemlock and hemlock-spruce forests are found along the wetland margins (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Prince of Wales Mountains	Hetta Inlet Metasediments	84%
	Moira Sound Complex	16%

(b) Soils: Soils are generally highly organic with low clay content. They are formed over bedrock and their typical depth is 40 inches. Generally, steeper areas have better-drained soils and flat areas are poorly drained.

(c) Vegetation: Vegetation in this area is typical of Southeast Alaska coastal temperate rain forests. Mixed conifer and western hemlock-red-cedar plant associations dominate the area. Western hemlock, Sitka spruce, and cedar are the most common trees. There are less than 100 acres of muskeg mapped in the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. There are approximately 1,050 acres of alpine mapped in the area.

There are approximately 51,162 acres mapped as forest land of which 32,739 acres or 64 percent are mapped as productive old-growth forest. Of the productive old growth, 20,823 acres or 64 percent are mapped as high-volume old-growth forest. The productive old growth includes about 13,348 acres of high-volume, coarse-canopy old growth. There are also 252 acres of second growth resulting from beach logging in the 1960s.

(d) Fish Resources: Productive waters in the area include streams draining into Nutkwa Lagoon, Keete Inlet, Hassiah Inlet, Mabel Bay, and Kassa Inlet. The Anadromous Waters Catalogue (ADF&G, 2000) shows that most of these streams provide habitat for coho, pink, and chum salmon. In addition, sockeye salmon and steelhead trout inhabit the stream flowing into Nutkwa Lagoon.

(e) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, wolves, river otter, marten, mink, loon, and common waterfowl. Moose reportedly inhabit Prince of Wales Island, but they have not been reported here. Brown bear and mountain goats do not inhabit the area (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: This area was allocated to six Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These six LUDs are Timber Production, LUD II, Old-growth Habitat, Remote Recreation, and Semi-remote Recreation.

LUD	Acres
Timber Production	26,675
Modified Landscape	711
LUD II	21,455
Old-growth Habitat	4,035
Remote Recreation	3,229
Semi-remote Recreation	713

Approximately 48 percent of the roadless area was allocated to a development LUD. The development LUDs in this roadless area are Timber Production and Modified Landscape.

Approximately 52 percent of the roadless area was allocated to a non-development LUD (LUD II, Old-growth Habitat, Remote Recreation, Semi-remote Recreation). Approximately 38 percent of the roadless area was designated to LUD II. This LUD includes most of the Nutkwa watershed. The Old-growth Habitat LUD was assigned to approximately 7 percent of the roadless area. About 3,229 acres in eastern Kassa Inlet was allocated to the Remote Recreation LUD, which makes up approximately 6 percent of the roadless area. The Semi-remote Recreation LUD was assigned to approximately 1 percent of the roadless area.

The area receives little use due to its remoteness. There is one public recreation cabin located in the northwest corner. Several mineral claims are also located in the northwest corner. No outfitter/guide permits were issued for the roadless area in 2000.

(6) Appearance (Apparent Naturalness): The area appears unmodified, except for the mineral patents in the northwest corner of this roadless area, which create the only break in its natural integrity.

(7) Surroundings (External Influences): This roadless area is bounded on the southeast by the South Prince of Wales Wilderness. The Eudora Roadless Area (507) is northeast of the Nutkwa Roadless Area. Cordova Bay lies to the southwest, Sealaska Regional Corporation lands lie to the west and Haida Native Corporation lands lie to the northeast. The northwest boundary is Native Corporation land while the remaining boundary is saltwater. Much of the Native Corporation land to the west has been managed for timber production, which has affected the apparent naturalness of portions of the adjacent roadless area.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, the saltwater bays and inlets, and the opportunity to see wildlife and to study the processes which formed this country may all be attractions. The alpine lakes around the Lake Josephine public recreation cabin are an outstanding attraction. The fishing and solitude of the area are also attractions. Lake Josephine, Gertrude, and Summit lakes were stocked with fish by the State in years past. A big attraction to visitors staying at Lake Josephine public cabin is the extensive hunting opportunities for black-tailed deer in the alpine areas. Also, cross-country hiking along the alpine areas and ridge tops are another major draw. The area contains seven inventoried recreation places, which cover 23,718 acres, or 42 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: There have been minor changes in the boundaries since 1989. Additional areas in the northwest are now non-National Forest System land. Several small areas along the shore that were beach logged but not roaded have been included in the roadless area. Trees in these logged areas have re-grown and the areas no longer appear modified.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: This area is in a natural, unmodified condition. The mineral patents in the northwest corner of this roadless area create the only break in its natural integrity. These mineral patents have a relatively low effect on suitability of the roadless area for wilderness classification based on natural appearance. The private lands along much of the west boundary have been developed for timber management and affect the natural integrity and apparent naturalness of the area. Overall, the area has high natural integrity and apparent naturalness because of the size of the area coupled with adjacent roadless lands that can absorb nearby effects.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: Except for the western boundary of the area where sights and sounds of management activities and vehicle traffic may be evident, the area provides very high opportunities for solitude and outstanding opportunities for primitive recreation, especially when adjacent roadless lands are factored in. The remoteness and difficult access make it unlikely that there would be much human activity in the area in the foreseeable future. Visitors could also be distracted by the sounds of active mining (blasts) in the northwest portion, but these activities are rare.

The roadless area contains steep, rugged terrain, rising to over 3,000 feet in elevation. The steep nature of portions of the area, its vastness, and the presence of black bears present a high degree of challenge and the need for woods skills and experience.

There are outstanding opportunities primarily for primitive recreation in many parts of this area due to the scenic, fishing, and canoeing opportunities in the Nutkwa Lagoon area, and the scenic, hiking and camping opportunities in the Lake Josephine area. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	56,679	100%
Semi-Primitive Non-Motorized (SPNM)	109	0%

The area contains seven inventoried recreation places, which cover 23,718 acres, or 42 percent of the roadless area.

ROS Class	# of Rec. Places	Total Acres
P	7	23,718
SPNM	0	0

There is a public recreation cabin near Lake Josephine.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Nutkwa Roadless Area Roadless Area was 25 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 23. This rating is reflective of developments on private lands to the west of the roadless area.

(4) Ecologic and Geologic Values:

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCU 686, just north of South Prince of Wales Wilderness Area, as a primary salmon producer. No VCUs were listed as primary sport fish producers.

The Anadromous Waters Catalogue (ADF&G, 2000) shows that most of the streams in this area provide habitat for coho, pink, and chum salmon. In addition, sockeye salmon and steelhead trout inhabit the stream flowing into Nutkwa Lagoon. Nutkwa Lagoon receives an estimated peak escapement of 155,000 pink salmon (ADF&G, 1998). Other productive streams in the area drain into Keete Inlet, Hassiah Inlet, Mabel Bay, and Kassa Inlet (ADF&G, 2000).

(b) Wildlife Resources: The roadless area has populations of Sitka black-tailed deer, black bear, wolves, river otter, marten, mink, loon, and common waterfowl. Moose reportedly inhabit Prince of Wales Island, but they have not been reported here. Brown bear and mountain goats do not inhabit the area (MacDonald and Cook, 1999).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Craig Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are several small areas of high vulnerability karst in the northern part of this roadless area. These areas are located near Lake Marge. A second small karst area can be found along the point projecting into Hassiah Inlet from the peninsula to the north. The karst resources represent 260 acres of mostly high vulnerability karst and less than 1 percent, of the roadless area. There are no glaciers or unique geologic features known in this area.

(5) Scientific and Educational Values: There are no known features with scientific values within the area. There are opportunities to study forests, fish, wildlife, and geologic processes.

(6) Scenic Values: The entire area is part of the Coastal Hills character type which is characterized by moderately steep landforms, elevations reaching 4,500 feet, and flat-floored, U-shaped valleys. Numerous island groups are also common. This roadless area is representative of the character type, exhibiting all the above features except for the absence of any significant island clusters.

The area appears natural when viewed from surrounding waterways or within the area. Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include the Kassa Inlet and Mabel Bay boat anchorages and the Lake Josephine public recreation cabin.

Approximately 28 percent of the area is rated as Variety Class A, possessing landscape diversity that is unique for the character type. These outstanding landscapes are primarily the rugged, high elevations between the head of Nutkwa Lagoon and the West Arm of Cholmondeley Sound, and the alpine area around Josephine Lake near Copper Mountain. These landscapes exhibit a diversity of rugged alpine terrain, several different lake basins, and diverse vegetative patterns. Approximately 71 percent of the roadless area is rated as a Variety Class B, possessing landscape features that are common for the character type.

Almost the entire area, approximately 99 percent, is in Type I Existing Visual Condition, the natural landscape remains unaltered by human activity.

(7) Social, Cultural, and Historical Values: South Prince of Wales Island was inhabited by the Tlingit until the Haida, who migrated north from the Queen Charlotte Islands, displaced them in the early 1700s. Since then, the roadless area has been within the principal traditional-use area of the Haida. Prior to use by the Haida culture, there is evidence that there was considerable prehistoric use of coast sites. In recent years, land northwest of the current roadless area has been conveyed to the Haida and two small parcels along Kassa Inlet have been conveyed to the State. The Nutkwa Roadless Area has always been considered a remote area of Prince of Wales Island. The major sounds and bays provide bases for commercial fishing including anchorages, fish processing facilities, and fish buying stations. Since the early 1900s, there has been an interest in the mineral resources. As a result, there are two patented mining claims and several unpatented claims that are currently active. There are outstanding opportunities for primitive recreation in many parts of this area due to the scenic, fishing, and canoeing opportunities in the Nutkwa Lagoon area, and the scenic, hiking and camping opportunities in the Lake Josephine area. There is one public recreation cabin located in the northwest corner. No outfitter/guide permits were issued for the roadless area in 2000. However, recreation or subsistence use is low due to the remoteness and difficulty of access. None of the VCUs in the roadless area is listed among the VCUs with the highest or second or third community fish and wildlife values. VCUs 6731, 685, and 6851 in the center and adjacent to Prince of Wales Wilderness Area are listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: There are a few places where the mineral patents may affect the ability to manage the area around them in a roadless condition. Also, the long western boundary is not based on topographic features. Dropping the area northwest of the Nutkwa LUD II area could reduce conflicts with mining.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Cruse ships regularly stop in Ketchikan. There is the potential for some of these tourists to be drawn to fish, hunt, and camp in the roadless area. There is a potential for outfitter/guide permits to increase. There is good opportunity for primitive and semi-primitive recreation within this roadless area. Because of its remoteness and difficult access, it is unlikely that there will be a need to develop facilities or trails in the rugged alpine areas. However, there is the potential for campsites or recreation shelters in Nutkwa Lagoon area. In 1996, the Alaska Visitors Association (AVA) proposed a backcountry recreation lodge in Mabel Bay to accommodate 480 people.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistence use.

(3) Fish Resources: No fish habitat enhancement projects are currently planned within the roadless area.

(4) Wildlife Resources: No wildlife habitat enhancement projects are currently planned within the roadless area.

(5) Timber Resources: There are 32,739 acres of productive old-growth forest and 252 acres of second-growth forest due to harvest mapped in the roadless area. Of this, approximately 13,030 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 4,697 acres or 8 percent of this roadless area are estimated to be suitable for timber production. Approximately 2,622 of the suitable acres are mapped as high-volume old growth; of these acres, 1,187 are mapped as high-volume, coarse-canopy old growth. The area has very good timber potential; however, the roadless area is remote and difficult to access. Managing timber in most of the roadless area would require developing LTFs and a road system.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: The Josephine Lake area is famous for its quartz and epidote crystals. There are several mining claims in the area. Some are active, and others have been idle for some time (Tongass National Forest Recreation Cabin website, 2001). Copper and gold deposits were mined in the Nutkwa area but the mine is no longer operating (TLMP, 1997). There is potential for further mineral development in the northern part of the roadless area. The USGS Mineral Resources Data website (2001) shows numerous prospects for copper, lead, and iron in this area. This area contains 6,974 acres of land identified as a mineral activity tract. In the tract, 4,962 of the acres is considered to have high and 2,012 is considered to have low potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). In addition, this area contains 54,787 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 12,034 of these acres are considered to have moderate to high potential for development.

(8) Transportation and Utilities: There are no existing or planned transportation or utility corridors in the roadless area.

(9) Water Availability and Use: The public recreation cabin around Josephine Lake is the only water demand in this area. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The mapped karst resources encompass approximately 260 acres or less than one percent of the roadless area. There are no other known areas of special scientific interest in the roadless area.

(11) Land Use Authorizations: There are no special use permits or land use authorizations in the roadless area.

(12) Land Status: The northwest corner of this roadless area has 2 blocks of private lands as a result of patented mining claims totaling about 300 acres. This roadless area contains encumbered lands in the northwest corner of the roadless area and around Mabel Bay.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: There is local interest in the roadless area for subsistence and recreation use.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. The portion of the Nutkwa watershed that is National Forest System land was designated as LUD II by the Tongass Timber Reform Act of 1990. In 2001, HR 2908 proposed designating the area south of the Nutkwa LUD II area as wilderness and managing the remainder of the roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: The Southeast Alaska Conservation Council and others recommended managing Kassa Inlet to preserve its integrity. They stated that the island merited special protection for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. Others recommended that the area be given LUD II status. The Alaska Rainforest Campaign also recommended that Kassa Inlet be given LUD II status. There was a concern that logging in the Inlet would affect Haida cultural values. In 1996, the Alaska Visitors Association (AVA) proposed a backcountry recreation lodge in Mabel Bay to accommodate 480 people. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated on the Tongass National Forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless are available.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as having important fish and wildlife habitat and populations; although not a top priority for protection, it ranked in their top third among all roadless areas.

Alaska Department of Fish and Game recommended permanent roadless status for the Honker Divide area in their comments on the Draft SEIS.

ADF&G rated the Nutkwa roadless area (VCUs 685, 686, and 689) as the third highest priority for protection on Prince of Wales Island and Adjacent Islands. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 507 and 531 as adjacent to the existing South Prince of Wales Wilderness and recommended them for permanent protection as wilderness. They indicated that this combination would create a contiguous wilderness area of approximately 350,000 acres. SEACC recommended that this area be designated as LUD II and added to the existing Nutkwa LUD II. Note that this recommendation is different than Alternative 6

A number of individual commenters identified the Keete and Kassa Inlets and Mabel Bay as areas in need of protection.

(2) Nearby Roadless and Wilderness Areas and Uses: This area is part of a larger contiguous unroaded area that includes the South Prince of Wales Wilderness, the Eudora (507), and McKenzie (519) Roadless Areas. This combined area totals 533,474 acres. Recreation and subsistence are the primary uses in these areas. Generally, use is light.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	225	290
Ketchikan (Pop. 14,070)	30	85
Wrangell (Pop. 2,308)	85	170
Petersberg (Pop. 3,324)	110	175

Hollis, located on Prince of Wales Island, currently is the nearest stop on the Alaska Marine Highway. Hollis is 30 miles from Hydaburg by road. The roadless area is 15 to 20 air miles from Hydaburg.

(4) Relative Contribution to the National Wilderness Preservation System: The Nutkwa Roadless Area is located on the southwest corner of Prince of Wales Island, northeast of the South Prince of Wales Wilderness. The Eudora Roadless Area (507) is northeast of the Nutkwa Roadless Area. Cordova Bay lies to the southwest and Haida Native Corporation lands lie to west. The topography is steep and rugged and the coastline is highly dissected, and has steep, rugged terrain, rising to over 3,000 feet in elevation. The vegetation in this province is strongly influenced by southwesterly storms.

Most of the area is unmodified and natural appearing. However, developments along the western boundary influence that portion of the area. The natural integrity and apparent naturalness of the area is high. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

The roadless area has moderate to high scenic quality; approximately 28 percent of the landscape is considered distinctive from a scenery standpoint. Recreation is relatively high, especially around the lakes of the area, and minerals related activity is high. There area a few small areas of karst development in the area. There are no other significant or unique features in the area.

The roadless area includes about 20,823 acres of high-volume, old-growth forest. Of these acres, approximately 13,348 are mapped as high-volume, coarse-canopy old growth. It ranks among the top five Tongass roadless areas in terms of acres of high-volume, coarse-canopy old growth; the majority of this old growth is contained within non-development LUDs.

The Nutkwa Roadless Area is classified as being in the South Prince of Wales Island Biogeographic Province and makes up about 14 percent of the province. It is one of three inventoried roadless areas found within the province which makes up about 66 percent of the province. The South Prince of Wales Wilderness is also in the province and makes up about 22 percent of the province. Additionally, about 5 percent of the province is located within the Nutkwa LUD II area.

The Nutkwa Roadless Area lies completely within the Prince of Wales Mountains Ecological Section and represents 15 percent of the ecological section. Approximately 7 percent of the Prince of Wales Mountains Ecological Section is in existing wilderness, 3 percent is in existing LUD II, and 22 percent is protected by other existing non-development LUDs.

The majority (84 percent) of the roadless area is in the Hetta Inlet Metasediments Ecological Subsection; this portion of the roadless area represents 21 percent of the entire ecological subsection, 2 percent of which is in existing wilderness, 9 percent in LUD II, and 14 percent is protected by other existing non-development LUDs. The remainder (16 percent) of the roadless area is in the Moira Sound Complex Ecological Subsection; this portion of

the roadless area represents 8 percent of the entire ecological subsection, 23 percent of which is protected in existing wilderness and 35 percent in other existing non-development LUDs.

The Nutkwa Roadless Area was rated 23 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 30th from the highest (along with 7 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for designating all, or part of the roadless area as wilderness and for managing the remainder in an unroaded condition. Designation would create a wilderness that would be an addition to the South Prince of Wales Wilderness. The relatively high minerals-related activity would likely conflict with wilderness objectives in portions of the area. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate.

V. Environmental Consequences

The Nutkwa Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, or 4 is implemented. Approximately 53 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 47 percent of the roadless area. The land in the development LUDs includes an estimated 4,697 acres that are suitable for timber production (7 percent of the suitable acres on the Craig Ranger District). Approximately 1,187 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 6,974 acres of land identified as a mineral activity tract. In the tract, 4,962 of the acres are considered to have high and 2,012 are considered to have low potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains 54,787 acres of undiscovered locatable mineral resources; 12,034 of the acres are considered to have moderate to high potential for development. The recreation, minerals, and special use programs would continue. Planning for timber sales would continue. The values associated with the natural settings of the roadless area could be affected by management activities allowed in the non-LUD II portion by the Forest Plan.

Under Alternative 2, all of the existing LUD II area would be converted to Recommended Wilderness LUD. This would not affect timber sale projects because this area is currently allocated to a non-development LUD. The total area identified as suitable for timber harvest would not change from Alternative 1. Ongoing recreation, special use, and minerals programs could be restricted in the Recommended Wilderness LUD area. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the existing LUD II portion of the roadless area, including the high scenic, historic, recreation, and karst values, would continue to be provided long-term protection if designated wilderness.

Under Alternatives 5 or 7, from 51,907 to 51,997 acres of the roadless area in Remote Recreation, Old-growth Habitat, Semi-remote Recreation, LUD II, and Timber Production LUDs would be converted to Recommended Wilderness LUD. Lands suitable for timber production in the roadless area would be reduced to 32 acres. Timber harvest would not be allowed and ongoing recreation, special use, and minerals programs could be restricted in the Recommended Wilderness LUD area. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the majority of the roadless area, including the high scenic, historic, recreation, and karst values, would be provided long-term protection if designated wilderness.

Under Alternative 6, a 4,824-acre portion of the area would be converted to Recommended LUD II, and a 30,539-acre portion converted to Recommended Wilderness LUD. This would convert all lands not currently designated as LUD II to Recommended LUD II or Recommended Wilderness. No timber harvest would be allowed. Ongoing recreation, special use, and minerals programs could continue similar to current conditions with little restriction in the LUD II and Recommended LUD II areas but could be restricted in the Recommended Wilderness area. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the high scenic, historic, recreation, and karst values, would be provided long-term protection if designated LUD II or wilderness.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. No timber harvest would be allowed. Ongoing recreation, special use, and minerals programs could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the high scenic, historic, recreation, and karst values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 531 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness		21,455			51,907	30,539	51,997	56,818
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation	3,229	3,229	3,229	3,229	20			
Enacted Municipal Watershed								
Old-growth Habitat	4,035	4,035	4,035	4,035	47			
Semi-remote Recreation	713	713	713	713				
Recommended LUD II						4,824		
LUD II	21,455		21,455	21,455		21,455		
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	711	711	711	711	711		711	
Timber production	26,675	26,675	26,675	26,675	4,133		4,110	
TOTAL	**56,818**	**56,818**	**56,818**	**56,818**	**56,818**	**56,818**	**56,818**	**56,818**
Suitable Timber Lands	4,697	4,697	4,697	4,697	32	0	32	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Fake Pass (532)

ACRES (NFS): 876

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Kuiu-Prince of Wales Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 22

I. Overview and Description

(1) Location and Access: The Fake Pass Roadless Area consists of a group of small islands, including Whale Head Island and Green Island. These islands lie across Cosmos Pass from the southern coast of Kosciusko Island. The southern portion of Kosciusko Island is privately owned. Davidson Inlet lies to the east, Warren Channel lies to the west, and Iphigenia Bay lies to the southwest. The roadless area is approximately 50 air miles northwest of Craig. These islands are inaccessible by sea to all but highly skilled boat handlers. The roadless area is accessible by helicopter. There are no developed trails in the roadless area. There are no places suitable for landing wheeled airplanes.

(2) History: There is no record of any prehistoric or historic use of this group of islands. However, at least some low level of use is certain.

(3) Geography and Topography: All 57 of the islands in this roadless area are low-lying, rocky, and windswept. Whale Head Island, a prominent feature on the landscape, is the largest island in the group (381 acres). Elevations on the island range from sea level to about 200 feet. This roadless area contains 26 acres of rock and 22 miles of saltwater shoreline. There is no alpine or icefield features mapped in this area.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The islands are in the North Central Prince of Wales Island Biogeographic Province. This province is characterized by relatively gentle topography, relatively low precipitation, numerous caves, and karst topography. The major islands in the roadless area have the characteristic gentle rolling topography with localized areas of rugged terrain.

Ecological Section/Subsection. The Fake Pass Roadless Area is contained entirely within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F), North Prince of Wales-Kuiu Carbonates Ecological Subsection (see table below). Limestone and marble karstlands form the underlying geology. Karstlands contain a variety of unique features including conical pits, shafts, cliffs, caves, and networks of groundwater channels resulting from the weathering of karst. Hemlock and hemlock-spruce forests are found on karst soils, which can be highly productive (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kuiu-Prince of Wales Fjordlands	North Prince of Wales- Kuiu Carbonates	100%

(b) Soils: These islands are essentially rock with some niches of soil located in crevices.

(c) Vegetation: The larger islands of the roadless area are forested but tree growth is poor, and the smaller islands are essentially devoid of trees and other kinds of vegetation.

There are approximately 849 acres mapped as forestland, of which 765 acres or 90 percent are mapped as productive old-growth forest. Of the productive old growth, 679 acres or 89 percent are mapped as high-volume old-growth forest. The productive old growth includes about 173 acres of high-volume, coarse-canopy old growth. There is no mapped second-growth forest where timber harvest has occurred in the past.

(d) Fish Resources: There is no freshwater fish habitat on any of the islands.

(e) Wildlife Resources: The roadless area provides habitat for sea birds and mammals. Bald eagles are common here. Wolves and Sitka black-tailed deer inhabit Whale Head Island (MacDonald and Cook, 1999). Black and brown bear, mountain goats, and moose do not inhabit these islands.

(5) Management Direction and Current Uses: The roadless area was allocated to two Land Use Designations (LUD) under the 1997 Tongass Land and Resource Management Plan. These two LUDs are Scenic Viewshed and Semi-remote Recreation.

LUD	Acres
Scenic Viewshed	156
Semi-remote Recreation	720

The roadless area contains one development LUD, Scenic Viewshed. Approximately 18 percent of the roadless area was allocated to the Scenic Viewshed LUD.

Most of the roadless area was allocated to one non-development LUD, Semi-remote Recreation LUD. The Semi-remote Recreation LUD was allocated to approximately 82 percent of the roadless area.

The roadless area receives little use and it does not appear to have been used much in the past, probably due to the difficulty of accessing the islands.

(6) Appearance (Apparent Naturalness): This roadless area has excellent natural integrity, due in part to difficulty of access and lack of historic development. The roadless area has a natural appearance.

(7) Surroundings (External Influences): These islands are not influenced by any external activity, land designation, or land use.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, the karst features (unknown), and the opportunity to see wildlife may all be attractions. The area contains two inventoried recreation places, which cover 764 acres (87 percent) of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The roadless area boundary has not changed between 1989 and 2003.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The roadless area has excellent natural integrity and apparent naturalness, due in part to difficulty in accessing the islands and lack of historic development. This area is suitable for wilderness classification, but is relatively small.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is moderate opportunity for solitude and primitive recreation within the roadless area. There are good opportunities for sea kayaking, camping, and hiking in the area, especially on Whale Head Island. Self-reliance, challenge, and adventure are high in association with boating activities, particularly sea kayaking. The area has potential for primitive recreation use, because of the limited recreation attractions, the difficult rocky access to these islands, and the lack of fresh water.

These islands are accessible by sea, to highly skilled boat handlers, but afford few protected bays and shorelines creating a high degree of challenge for users.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Motorized (SPM)	780	89%
Rural (R)	84	10%

The area contains two inventoried recreation places, which cover 764 acres (87 percent) of the roadless area.

ROS Class	# of Rec. Places	Total Acres
SPM	2	764
R	0	0

There are no developed recreation facilities in the roadless areas.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Fake Pass Roadless Area was 19 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 22. This rating is reflective of the outstanding natural integrity and apparent naturalness of the islands.

(4) Ecologic and Geologic Values: No significant ecologic or geologic features are known in this area. The roadless area is comprised of islands south of Cosmos Pass and is not a part of a larger unroaded area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment lists VCU 546, Green Island, as a primary salmon producer. However, there is no freshwater fish habitat on any of the islands in the roadless area. No VCUs were listed as primary sport fish producers (ADF&G, 1998).

(b) Wildlife Resources: The roadless area provides habitat for sea birds and mammals. Bald eagles are often seen here. Wolves and Sitka black-tailed deer inhabit Whale Head Island (MacDonald and Cook, 1999). Black and brown bear, mountain goats, and moose do not inhabit these islands.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are

closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Thorne Bay Ranger District.

(d) Karst, Cave, and Other Geologic Resources: Karst and cave formations in the limestone underlying this roadless area have not been fully inventoried. Approximately 641 acres (73 percent) of this area has been identified as low vulnerability karst resources. There are no glaciers or unique geologic features in the roadless area.

(5) Scientific and Educational Values: There is an opportunity to study karst and isolated populations of small mammals. There are no nearby educational institutions likely to use the roadless area for educational purposes given the difficulty of accessing these islands.

(6) Scenic Values: The entire roadless area is part of the Kupreanof Lowlands Character Type which is characterized by low, rolling relief, with elevations seldom greater than 1,500 feet. Numerous island groups and intricate waterways are also common in this character type. This area consists of a cluster of many islands of different sizes, and is characteristic of the character type.

The roadless area is dominated by unmodified landscapes when viewed from surrounding waterways. Also, the landscape appears scenic and unmodified from inside the roadless area. Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include the Davidson Inlet saltwater use area, and the communities of Edna Bay and Cape Pole.

Approximately 74 percent of the area was inventoried as Variety Class B; it possesses landscape diversity common in the character type. The remaining 26 percent was not inventoried for Variety Class type.

Approximately 74 percent of the area was inventoried as Type I Existing Visual Condition (EVC), where the natural landscape has remained unaltered by human activity. The remaining 26 percent was not inventoried for Variety Class type.

(7) Social, Cultural, and Historical Values: There is no record of any prehistoric or historic use of this group of islands. The roadless area is difficult to access and has few resources. It receives little use. However, VCU 546, Green Island, was listed among the VCUs with the highest community use values and both VCUs (546 and 545) were listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas.

(8) Manageability as Wilderness and Boundary Conditions/Changes: Because this roadless area is a group of relatively isolated islands with little activity, it would be easy to manage as a wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Wildlife viewing, camping, hiking, sea kayaking, and exploring have the potential to increase as tourism and recreation increase throughout Alaska. Tourism potential is a major part of Alaska's economy. The industry attracts over 1.1 million visitors annually. There has been a growing recognition that tourism depends on scenic quality, wildlife, and wilderness (Behnke, 1999). However, due to the difficult access and lack of recreation opportunities, this roadless area has little potential to draw tourists or for recreation development or enhancement.

(2) Subsistence Uses: There is little, if any, subsistence use in the roadless area. Designation as a wilderness would not affect use.

(3) Fish Resources: No fish habitat enhancement projects are planned within the roadless area.

(4) Wildlife Resources: No wildlife enhancement projects are planned within the roadless area.

(5) Timber Resources: There are 765 acres of productive old-growth forest and no second growth due to harvest mapped in the roadless area. Of this, approximately 760 acres are categorized as tentatively suitable for timber harvest. None of this area is estimated to be suitable for timber production based on the Forest Plan LUDs assigned to this area.

(6) Fire, Insects, and Disease: The roadless area has no known fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: The mineral potential is low.

(8) Transportation and Utilities: There are no proposed transportation or utility corridors within, or adjacent to, this area.

(9) Water Availability and Use: There are no public recreation cabins or other facilities that create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The karst features may be of some scientific interest. The mapped karst resources encompass approximately 641 acres or 73 percent of the roadless area.

(11) Land Use Authorizations: There are no special use permits in the roadless area.

(12) Land Status: The roadless area is entirely National Forest System land.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Little interest has been expressed in these islands by local residents.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. The roadless area was not one of these areas. In 2001, HR 2908 proposed managing the roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: There were no specific comments on the Fake Pass Roadless Area.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments on this roadless area are available.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended this area be designated as LUD II.

(2) Nearby Roadless and Wilderness Areas and Uses: The Kosciusko Roadless Area (515) is approximately 8 miles to the northeast and the Christoval Roadless Area (508) is approximately 5 miles to the south on Heceta Island. The Warren Island Wilderness is about 6 miles to the west and the Maurelle Islands Wilderness is approximately 11 miles away, south of Heceta Island. These areas are primarily used for recreation and subsistence. Use levels are generally low.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	100	150
Wrangell (Pop. 2,308)	80	120
Petersburg (Pop. 3,324)	110	150
Juneau (Pop. 30,711)	225	270

Hollis, located on Prince of Wales Island, currently is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Fake Pass Roadless Area consists of a group of small islands, including Whale Head Island and Green Island. These islands lie across Cosmos Pass from the southern coast of Kosciusko Island. Davidson Inlet lies to the east, Warren Channel lies to the west, and Iphigenia Bay lies to the southwest. All of the islands in the roadless area are low-lying, rocky, and windswept. Whale Head Island is the largest island in the group and elevations on the island range from sea level to about 200 feet.

The area is unmodified and natural appearing. The area has outstanding natural integrity and apparent naturalness. The opportunity for solitude and primitive recreation is moderate.

The area has moderate to high scenic qualities; none of the landscape is considered distinctive for the character type from a scenery standpoint. There are no known features of ecologic, geologic, scientific, or cultural significance in this small area.

The roadless area includes about 679 acres of high-volume, old-growth forest. Of these acres, approximately 173 are mapped as high-volume, coarse-canopy old growth.

The Fake Pass Roadless Area is classified as being in the North Central Prince of Wales Island Biogeographic Province and makes up less than 1 percent of the province. It is one of 15 inventoried roadless areas that are found within the province and that make up about 44 percent of the province. The Karta River Wilderness represents about 3 percent of the province. This province also contains the Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and the Salmon Bay Congressionally-designated LUD II areas, which make up about 5 percent of the area, and are managed to remain roadless.
The Fake Pass Roadless Area lies completely within the Kuiu-Prince of Wales Fjordlands Ecological Section and represents 0.1 percent of the ecological section. Approximately 13 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section is in existing wilderness, 8 percent is in existing LUD II, and an additional 33 percent is protected by other existing non-development LUDs.

All (100 percent) of the roadless area is in the North Prince of Wales-Kuiu Carbonates Ecological Subsection; it represents 0.3 percent of the entire ecological subsection, 2 percent of which is in existing LUD II, and 25 percent is protected by other existing non-development LUDs.

The Fake Pass Roadless Area was rated 22 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 38th from the highest (along with 8 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some support for managing the roadless area in an unroaded condition, but there is little identified support for designating the area as a wilderness. Designation would create a very small wilderness made up of a few small islands that have no known features of ecologic, geologic, scientific, or cultural significance in this small area. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate to low.

V. Environmental Consequences

The Fake Pass Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 82 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 18 percent of the roadless area; however, none of the land in the development LUDs is identified as suitable for timber production. The values associated with the natural settings of most of the roadless area are protected by the Forest Plan. They could be affected by ongoing development activities in those areas allowed by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II and would be managed as a non-development LUD. The potential for development, including recreation and mineral, would be similar to current conditions. The values associated with the natural settings of the roadless area, including the high scenic values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. The potential for development, including recreation and mineral, would be restricted. The values associated with the natural settings of the roadless area, including the high scenic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 532 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								876
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat								
Semi-remote Recreation	720	720	720	720	720		720	
Recommended LUD II						876		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	156	156	156	156	156		156	
Modified Landscape								
Timber production								
TOTAL	876	876	876	876	876	876	876	876
Suitable Timber Lands	0	0	0	0	0	0	0	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Hydaburg (533)

ACRES (NFS): 13,720

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Kuiu-Prince of Wales Fjordlands and Prince of Wales Mountains

2003 WILDERNESS ATTRIBUTE RATING: 19

I. Overview and Description

(1) Location and Access: The Hydaburg Roadless Area is on Prince of Wales Island, southeast of the community of Hydaburg. The roadless area is approximately 50 air miles southwest of Ketchikan and 20 air miles south of Hollis, the closest community on the Alaska Marine Highway. Sukkwan Strait lies to the southwest and Hetta Inlet lies to the east. Non-National Forest System lands lie to the north and northwest. There is also a small parcel of non-National Forest System land in the south, surrounding Eek Inlet. Access is by floatplane or boat. A road from Hydaburg reaches to less than a mile from the west corner of the roadless area. There are no places suitable for landing wheeled aircraft. Access to the interior is by foot or helicopter and floatplanes that land in Eek Lake. There are no developed trails in the roadless area.

(2) History: South Prince of Wales Island was inhabited by the Tlingit until the Haida, who migrated north from the Queen Charlotte Islands, displaced them in the early 1700s. Since then, the roadless area has been within the principal traditional-use area of the Haida. Land conveyed to the Haida Corporation nearly surrounds the roadless area. The modern community of Hydaburg was established in 1916. Prior to that, Haida people who wintered in the village of Sukkwan had subsistence camps in most of the bays in this area.

(3) Geography and Topography: The roadless area is a combination of flat to rolling topography and steep, rugged areas. The highest elevation is approximately 2,200 feet. The roadless area contains three medium-sized lakes, including Eek Lake. Freshwater lakes cover approximately 234 acres. There are 13 miles of saltwater shoreline, 171 acres of rock, and 161acres of alpine mapped in the area. The area also includes 5 islets totaling 2 acres.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is in the North Central Prince of Wales Island Biogeographic Province. This province is characterized by rolling, gentle landforms but with localized rugged topography. Limestone is common and overall forest productivity is high. Karst topography and caves are often present, though there are no known karst features in this roadless area. Precipitation is relatively low due to interception by lands to the south and southwest.

Ecological Section/Subsection. The Hydaburg River Roadless Area is covered by two ecological sections: the Kuiu-Prince of Wales Fjordlands (M247F) in the western two-thirds of the roadless area and Prince of Wales Mountains (M247I) in the eastern third. These areas are represented by two ecological subsections (see table below). The Soda Bay Till Lowlands Ecological Subsection covers two-thirds of the roadless area and is composed of a rolling landscape of sedimentary and volcanic geology. Wetlands are common on poorly drained soils, while productive hemlock or hemlock-spruce forests are on colluvium or well-drained till. Terrain in the Hetta Inlet Metasediments Ecological Subsection, which covers the remaining third of the roadless area, rises from deep fjords to sedimentary and volcanic peaks over 3,000 feet in elevation. The steep slopes are prone to frequent landslides. Soils in the lowlands, lying over poorly

drained glacial till, support wetlands. Productive forests are rare in the Hetta Inlet Metasediments Ecological Subsection (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kuiu-Prince of Wales Fjordlands	Soda Bay Till Lowlands	67%
Prince of Wales Mountains	Hetta Inlet Metasediments	33%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock, and are typically about 40 inches deep. Generally, steeper areas have better-drained soils and flat areas are poorly drained.

(c) Vegetation: This area is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce, with a large cedar component. Less than 100 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 13,039 acres mapped as forest land of which 7,880 acres or 60 percent are mapped as productive old-growth forest. Of the productive old growth, 4,113 acres (52 percent) are mapped as high-volume, old-growth forest. The productive old growth includes about 1,000 acres of high-volume, coarse-canopy old growth. There is no second growth in the area.

(d) Fish Resources: The streams and lakes in this area provide habitat for sockeye, pink, chum, and coho salmon as well as steelhead trout (ADF&G, 2000). There are very few fish-bearing waters in this area. Eek Lake and Creek and the headwaters for the stream flowing through Hydaburg into Sukkwan Strait are the primary producers.

(e) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, coyote, wolves, river otter, marten, mink, loon, and common waterfowl. Moose and mountain lion reportedly inhabit Prince of Wales Island, but they have not been reported here. Brown bear and mountain goats do not inhabit the area (MacDonald and Cook, 1999).

(5) Management Direction and Current Uses: The entire roadless area was allocated to one Land Use Designation (LUD) under the 1997 Tongass Land and Resource Management Plan. The LUD in this area is Semi-remote Recreation, a non-development LUD.

LUD	Acres
Semi-remote Recreation	13,720

(6) Appearance (Apparent Naturalness): This roadless area appears unmodified and in a natural condition; however, timber management-related developments have altered the surrounding landscape. This affects the apparent naturalness of the adjacent areas within the roadless area.

(7) Surroundings (External Influences): Developments on adjacent private lands nearly surround the roadless area. Haida Village Corporation owns the land to the south and northwest of the roadless area. Sealaska Regional Corporation owns land to the north. The southwest side of the roadless area abuts unmodified land, which is the Sukkwan Roadless Area. The Sukkwan Roadless Area lies about 1 mile across the Sukkwan Strait from the Hydaburg Roadless Area.

(8) Attractions and Features of Special Interest: There are no features of special interest in the roadless area. The area contains no inventoried recreation places.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The roadless area was not included in the 1989 inventory because it was thought to be roaded. Better mapping during the 1997 Plan Revision showed

the area to be unroaded and it was included in the 1997 inventory. Minor adjustments in landownership along the boundaries is ongoing.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area appears unmodified and in a natural condition. Developments on adjacent private lands to the north and west and on the east side of Hetta Inlet have altered the surrounding landscape. The natural integrity and apparent naturalness of the roadless area is relatively high, but its relatively small size and the extensive modification of the surrounding area makes the roadless area less suitable for wilderness classification.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The opportunity for solitude and primitive recreation in the roadless area is moderate due to activities on adjacent non-National Forest System lands and boat traffic in Hetta Inlet and Sukkwan Strait. The area receives some primitive recreation use, particularly near Eek Inlet and Eek Lake.

The roadless area contains some steep, rugged terrain, rising to over 2,000 feet in elevation. The steep nature of portions of the area, the lack of developed trails, and the presence of black bears presents a degree of challenge and the need for woods skills and experience. However, much of the roadless area has relatively gentle topography and is less challenging to cross. Also, the roadless area is relatively small and close to the community of Hydaburg. Overall, the roadless area is less challenging than larger and more remote roadless areas.

This area provides primarily primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	11,196	82%
Semi-Primitive Motorized (SPM)	2,428	18%
Roaded Modified (RM)	93	1%

The area contains no inventoried recreation places.

ROS Class	# of Rec. Places	Total Acres
Primitive	0	0
SPM	0	0
RM	0	0

There are no developed recreation facilities in the roadless area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The Hydaburg Roadless Area was not rated in 1989 and has received a rating of 19 for this update to the AMS.

(4) Ecologic and Geologic Values: The roadless area contains no apparent unique ecologic or geologic features.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCU 672, the majority of the roadless area, as a primary salmon and sportfish producer.

The streams and lakes in this area provide habitat for sockeye, pink, chum, and coho salmon as well as steelhead trout (ADF&G, 2000). There are very few fish-bearing waters in this area; however, Eek Lake, Eek Creek, and the headwaters for the stream flowing through Hydaburg into Sukkwan Strait are the primary producers. Eek Lake has runs of sockeye salmon and steelhead trout (ADF&G, 2000). Eek Lake receives an estimated peak escapement of 61,400 pink salmon (ADF&G, 1998).

(b) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, wolves, river otter, marten, mink, loon, and common waterfowl. Moose and mountain lion reportedly inhabit Prince of Wales Island, but they have not been reported here. Brown bear and mountain goats do not inhabit the area (MacDonald and Cook, 1999).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Craig Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are no glaciers or unique geologic features known in this area.

(5) Scientific and Educational Values: There are no known special features within this roadless area. There are opportunities to study forests, wildlife, fish, and geologic processes close to a town.

(6) Scenic Values: The area displays natural characteristics when viewed from major and minor water travel routes and from inside the area. The exception is when the area is viewed from South Pass/upper Sukkwan Strait and Hetta Inlet. The viewer may see activities in the adjacent roaded areas. Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area, include Hydaburg Road #13, the small boat route from Ulloa Channel to Hydaburg, the saltwater use area around Hydaburg and south through Sukkwan Strait, Hetta Inlet, and the Hydaburg Community.

Approximately 47 percent of this area was inventoried as Variety Class B, which possesses landscape characteristics common for the character type. Approximately 36 percent of the land was inventoried as Variety Class C, which possesses a low degree of landscape diversity. Approximately 17 percent of the area was not inventoried for Variety Class type.

The Existing Visual Condition (EVC) for approximately 47 percent of this area was listed as EVC I. Land in EVC I displays a natural landscape that has remained unaltered by human activity. Another 36 percent of the area was inventoried as EVC II, in which changes in the landscape are not noticeable to the average visitor unless pointed out. Approximately 17 percent of the area was not inventoried for EVC.

(7) Social, Cultural, and Historical Values: South Prince of Wales Island was inhabited by the Tlingit until the Haida, who migrated north from the Queen Charlotte Islands, displaced them in the early 1700s. Since then, the roadless area has been within the principal traditional-use area of the Haida. Land conveyed to the Haida Corporation nearly surrounds the roadless area. The area receives some recreation and subsistence use, primarily by the residents of Hydaburg. Neither of the VCUs in the roadless area are listed among the VCUs with the highest

community fish and wildlife values. VCU 672, the majority of the roadless area, is listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G 1998). No outfitter/guide permits were issued for the area in 2000. There has not been any timber harvest in the roadless area and none is planned.

(8) Manageability as Wilderness and Boundary Conditions/Changes: The southwest and east boundaries of this roadless area consist of saltwater shorelines. Haida Corporation lands form the boundary on the north and northwest and there is a small parcel of State land near Eek Inlet. The boundaries with these non-National Forest System lands are not well defined by topographic features. There are no apparent topographic boundaries that could be used to develop well-defined boundaries. The lack of well-defined boundaries, the development on adjacent lands, and the small size of the roadless area would make it more difficult to manage as a wilderness than most other roadless areas.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: Tourism has been increasing in Southeast Alaska and is expected to continue to increase. The roadless area is close to Hydaburg, which is approximately 30 miles by road from Hollis, a stop on the Alaska Marine Highway. There is the potential for some of the tourists visiting Prince of Wales Island to be drawn to the roadless area for remote recreation; however, the potential of other nearby roadless areas is much greater due to access, size, and the presence of features likely to draw visitors.

(2) Subsistence Uses: Management as a wilderness would not conflict with current subsistent use.

(3) Fish Resources: No fish habitat enhancement projects are planned within the roadless area.

(4) Wildlife Resources: No wildlife enhancement projects are planned within the roadless area.

(5) Timber Resources: There are 7,880 acres of productive old-growth forest and no second growth due to harvest mapped in the roadless area. Of this, approximately 7,002 acres are categorized as tentatively suitable for timber harvest. None of this are is designated as suitable for timber production based on the Forest Plan LUDs assigned to this area. Managing timber in most of the roadless area would require extending the road system from adjacent areas.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: Mineral development potential is very low. This area contains 13,493 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); all but 6 of these acres are considered to have low potential for development.

(8) Transportation and Utilities: There are no proposed transportation or utility corridors within the roadless area. A road from Hydaburg reaches to less than 1 mile from the west corner of the roadless area. The transportation corridor connects Hydaburg with the cities of Craig and Klawook. A potential power transmission corridor is also located along the existing transportation network.

(9) Water Availability and Use: There are no public recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: There are no known areas of scientific interest in the roadless area.

(11) Land Use Authorizations: There are no special use permits or other land use authorizations in the roadless area.

(12) Land Status: There are no non-National Forest System inholdings in the roadless area. There are several large parcels of land within the roadless area that are overselected and thus encumbered by Native Corporations.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Both the Haida Natives and the Haida Native Corporation have an interest in the future of this area because of its historic use by the Haida and because of adjacent corporation land holdings.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Hydaburg Roadless Area. In 2001, HR 2908 proposed managing the roadless area as LUD II in an unroaded condition.

(c) Public Input During Forest Plan Revision and Appeals: There were no specific comments on the roadless area. The Alaska Forest Association, the Alaska Miners Association, and the Alaska Visitors Association recommended that no new wilderness be designated on the Forest. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: No project-level comments for this roadless area have been identified.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended this area for permanent protection through LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 533 for permanent protection as LUD II.

(2) Nearby Roadless and Wilderness Areas and Uses: The area is separated from other roadless areas by saltwater. The Sukkwan Roadless Area (504) is about 1 mile to the southwest, across Sukkwan Strait. The Nutkwa Roadless Area (531) is 2 to 4 miles to the southeast, across Hetta Inlet and an area of non-National Forest System land. The South Prince of Wales Wilderness is adjacent to (and southeast of) the Nutkwa Roadless Area. Recreation and subsistence are the main uses in these areas. Use levels are generally low.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	225	180
Ketchikan (Pop. 14,070)	50	100
Wrangell (Pop. 2,308)	90	180
Petersberg (Pop. 3,324)	110	180

Hollis, the closest stop on the Alaska Marine Highway, is approximately 30 miles by road from Hydaburg.

(4) Relative Contribution to the National Wilderness Preservation System: The Hydaburg Roadless Area is on Prince of Wales Island, southeast of the community of Hydaburg. Sukkwan Strait lies to the southwest and Hetta Inlet lies to the east. Non-National Forest System lands lie to the north and northwest. There is also a small parcel of non-National Forest System land in the south, surrounding Eek Inlet. The roadless area is a combination of flat to rolling topography and steep, rugged areas. The highest elevation is approximately 2,200 feet. The roadless area contains three medium-sized lakes, including Eek Lake.

The area appears unmodified and in a natural condition. However, the area is influenced by developments on adjacent private lands. The natural integrity of the area is very high and the apparent naturalness is rated high. The opportunity for solitude and primitive recreation is moderate.

None of the landscape is considered distinctive for the character type from a scenery standpoint. There are no known features of ecologic, geologic, scientific, or cultural significance in this area.

The roadless area includes about 4,113 acres of high-volume, old-growth forest. Of these acres, approximately 1,000 are mapped as high-volume, coarse-canopy old growth.

The Hydaburg Roadless Area is in the North Central Prince of Wales Island Biogeographic Province and makes up about 1 percent of the province. It is one of 15 inventoried roadless areas found in the province that make up about 44 percent of the province. Unlike much of the province, the area has no karst or other outstanding or unique features. The Karta River Wilderness represents about 3 percent of the province. This province also contains the Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and the Salmon Bay Congressionally-designated LUD II areas, which make up about 5 percent of the area, and are managed to remain roadless.

The Hydaburg Roadless Area lies within two ecological sections; it represents 1 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section and 1 percent of the Prince of Wales Mountains Ecological Section. These ecological sections contain relatively low representation in existing wilderness (13 and 8 percent, respectively) and LUD II (8 and 3 percent, respectively), but they are well represented in other existing non-development LUDs (33 and 22 percent, respectively).

Two-thirds (67 percent) of the roadless area is in the Soda Bay Till Lowlands Ecological Subsection; this portion of the roadless area represents 6 percent of the entire ecological subsection, none of which is in existing wilderness or LUD II, but 4 percent is protected by other existing non-development LUDs. One-third (33 percent) of the roadless area is in the Hetta Inlet Metasediments Ecological Subsection; this portion of the roadless area represents 2 percent of the entire ecological subsection, 2 percent of which is in existing wilderness, 9 percent in LUD II, and 14 percent is protected by other existing non-development LUDs.

The Hydaburg Roadless Area is rated at 19 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 69th from the highest (along with 14 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for managing the roadless area in an unroaded condition, but there is little support for designating the area as a wilderness. Designation of the area would add Congressional protection to about 6 percent of the Soda Bay Till Lowlands Ecological Subsection, none of which is currently in wilderness or LUD II. Designation would create a wilderness with no known features of ecologic, geologic, scientific, or cultural significance in this area. Overall, the factors identified here indicate that the relative contribution to the National Wilderness Preservation System for this area would be low.

V. Environmental Consequences

The Hydaburg Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. All of the roadless area would be managed under non-development LUDs. This area contains an estimated 13,493 acres of undiscovered locatable mineral resources; all but 6 of these acres are considered to have low potential for development. The values associated with the natural settings of the roadless area are protected by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Because the area is already allocated to non-development LUDs, this conversion would have little effect on existing or future uses. Mineral prospecting and development, special uses, and recreation programs would continue. The values associated with the natural settings of the roadless area would be provided long-term protection if designated LUD II.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Mineral prospecting and development, special uses, and recreation programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 533 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								13,720
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat								
Semi-remote Recreation	13,720	13,720	13,720	13,720	13,720		13,720	
Recommended LUD II						13,720		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production								
TOTAL	**13,720**	**13,720**	**13,720**	**13,720**	**13,720**	**13,720**	**13,720**	**13,720**
Suitable Timber Lands	0	0	0	0	0	0	0	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Twelvemile (534)

ACRES (NFS): 34,333

BIOGEOGRAPHIC PROVINCE: North Central Prince of Wales Island

ECOLOGICAL SECTION: Kupreanof Lowlands and Prince of Wales Mountains

2003 WILDERNESS ATTRIBUTE RATING: 16

I. Overview and Description

(1) Location and Access: The Twelvemile Roadless Area is located on the east-central part of Prince of Wales Island approximately 40 air miles west of Ketchikan. It is bounded by roaded areas with the exception that Twelvemile Arm occupies part of the northern border. Twelvemile Arm and developments to the south divide the roadless area into two portions. State Highway 913 (the Hydaburg Road) lies to the west and the town of Hollis, the closest community on the Alaska Marine Highway, lies less than 1 mile north of the area across Twelvemile Arm. Access is by ferry through Hollis, by the extensive road system surrounding most of the area, by helicopter, and by boat or floatplane from Twelvemile Arm. There are no places suitable for landing wheeled aircraft

(2) History: The Polk Inlet and Twelvemile Arm areas were important locales of traditional use by the Haida Native people and before them, prehistoric cultures. The Kaigani Haida are recognized as having the rights to much of the lower half of Prince of Wales Island at historic contact (USDA Forest Service, 1995). The two remaining Haida villages are located just outside the roadless area at Hydaburg and Kasaan. Historic use of Twelvemile Arm included hunting, trapping, fishing, and gardening. Most of these activities were concentrated around the Harris River and the present day location of Hollis (USDA Forest Service, 1995). The Haida Native Corporation made large land entitlement selections to the south of the roadless area and the Sealaska Native Corporation owns land along the northeastern border.

The Twelvemile area has historically been a primary entry to Prince of Wales Island. The community of Hollis lies less than 1 mile north of the roadless area. Hollis began as a mining community, but it soon became the boat entry terminal through Kasaan Bay. Currently, Hollis is the only ferry stop on the Prince of Wales Island. Alaska Marine Highway has discontinued service to Hollis. Ferry service between Ketchikan and Hollis is now operated by the Inter-Island Ferry Authority (IFA). Mining, trading/supply, boat repair, and, more recently, timber and tourism, have been the influences on the general vicinity of the roadless area.

(3) Geography and Topography: The area is characterized by moderate topography. Most of this roadless area consists of rolling terrain; however, there are a few higher ridges with elevations ranging to above 2,400 feet. Old Franks and Indian Creeks are the largest streams occupying portions of the area. Alpine acres total 1,283 and 320 acres are rock. Freshwater lakes cover approximately 279 acres. Saltwater shoreline extends for about 18 miles along both sides of Twelvemile Arm. The area also contains eight islets totaling 3 acres.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the North Central Prince of Wales Island Biogeographic Province. This province is characterized by relatively gentle topography; limestone soils are common. Karst topography and caves are often present within the province; however, there is no known karst within this roadless area.

Ecological Section/Subsection. The Twelvemile River Roadless Area is covered by two ecological sections: the Kupreanof Lowlands (M247G) and Prince of Wales Mountains (M247I). These areas are

represented by three ecological subsections (see table below). The Central Prince of Wales Volcanics Ecological Subsection (98% of roadless area) occupies vast majority of the roadless area. At high elevations, soils are shallow over bedrock, often organic, and less productive. Well-drained, moderately to highly productive, glacial till soils predominate at lower elevations. Hemlock and hemlock-spruce forests occur on well-drained sites. The Skowl Arm Till Lowlands Ecological Subsection (2% of roadless area) is a landscape of glacially rounded, low hills, lakes, and wetlands (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Prince of Wales Mountains	Central Prince of Wales Volcanics	98%
	Hetta Inlet Metasediments	<1%
Kupreanof Lowlands	Skowl Arm Till Lowlands	2%

(b) Soils: These highly organic, low clay content soils are generally formed over bedrock and are typically about 40 inches deep.

(c) Vegetation: This area is typical southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce with large components of cedar. Approximately 139 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 31,669 acres mapped as forestland, of which 11,532 acres or 36 percent are mapped as productive old-growth forest. Of the productive old growth, 5,031 acres or 44 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,453 acres of high-volume, coarse-canopy old growth. There are also 980 acres of second growth resulting from older beach logging along Twelvemile Arm and recent helicopter harvest in the uplands east of Twelvemile Arm.

(d) Fish Resources: The streams in this area provide habitat for coho, pink, and chum salmon, cutthroat and steelhead trout, and Dolly Varden char. The Anadromous Waters Catalogue (ADF&G, 2000) shows a number of fish-bearing streams in this area, including Indian Creek, Old Franks Creek, Kina Creek, and upper Cabin Creek.

(e) Wildlife Resources: This area has high populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, and common waterfowl. Brown bear, moose, and mountain goats are not known to inhabit this area.

(5) Management Direction and Current Uses: This roadless area was allocated to five different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These five LUDs are Timber Production, Modified Landscape, Scenic Viewshed, Old-growth Habitat, and Semi-remote Recreation.

LUD	Acres
Timber Production	13,769
Modified Landscape	720
Scenic Viewshed	62
Old-growth Habitat	19,779
Semi-remote Recreation	3

Approximately 42 percent of this roadless area was allocated to a development LUD (Timber Production, Modified Landscape, and Scenic Viewshed). The Timber Production LUD was assigned to approximately 40 percent of the roadless area. Approximately two percent of the roadless area was allocated to the Modified Landscape LUD. Small portions of the area were allocated to the Scenic Viewshed LUD, which total less than one percent of the roadless area.

Most of this roadless area was allocated to non-development LUDs (Old-growth Habitat, Semi-remote Recreation). The Old-growth Habitat LUD comprises 58 percent of the roadless area. The islands along the Twelvemile Inlet were allocated to the Semi-remote Recreation LUD, which accounts for less than one percent of the roadless area.

The Twelvemile Inlet area is the site of recent active timber sales associated with the Polk Inlet Project. This project resulted in recent harvest and road construction in the Twelvemile Arm and Polk Inlet portions of the area and along Indian Creek.

Dispersed recreation is also an important use in this area. The convenient road and boat accesses have made such places as the Harris River, Indian Creek, Twelvemile Arm, and other streams and waterways popular fishing and hunting places. Indian Creek Road is gated and closed to motorized vehicles. One Duck Trail and Shelter is located within the roadless area. Pass Lake Trail is located along the Polk Road just outside the roadless area. Twelvemile Arm is popular for dispersed camping and recreation opportunities.

(6) Appearance (Apparent Naturalness): This roadless area is somewhat fragmented and is completely surrounded by timber management related developments with the exception of the portion along Twelvemile Arm; however, this area has experienced fairly extensive beach logging. The land remaining within the roadless area appears unmodified and in a natural condition.

(7) Surroundings (External Influences): This area is almost completely surrounded by developed areas. The exceptions are in portions of the area along Twelvemile Arm. Timber management related developments are ongoing on adjacent National Forest System lands and lands to the northeast owned by Sealaska Regional Corporation. This area receives higher use by people than many other unroaded places on Prince of Wales Island because of its proximity to Hollis and the Prince of Wales Island road system.

(8) Attractions and Features of Special Interest: The natural features of the Twelvemile Roadless Area, the scenery, the saltwater bays and inlets, and the opportunity to see wildlife are all attractions. The area contains 12 inventoried recreation places, which cover 23,530 acres, or 69 percent of the roadless area. Many of these recreation places are readily accessible to residents of Hollis and other areas on Prince of Wales Island.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The Twelvemile Roadless Area was originally part of the much larger Polk Roadless Area identified in 1989. Because of ongoing developments in the area since then, the Polk Roadless Area was divided into three separate areas: Kasaan Bay, McKenzie, and Twelvemile Roadless Areas. The Twelvemile portion of the original Polk Roadless Area has been reduced in size by the ongoing developments conducted in the late 1990's, particularly in the Indian Creek, upper Old Franks Creek, upper Cabin Creek, and Polk Inlet areas. Several smaller areas near developed boundaries have been excluded between the Draft and Final SEIS to improve manageability in those areas.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The land within the roadless area appears unmodified, with the exception of older beach logging along Twelvemile Arm and recent helicopter harvest in the uplands nearby; however, much of this area is highly fragmented and is surrounded by ongoing developments. The degree of landscape alteration surrounding this roadless area reduces the natural integrity and apparent naturalness of this area to a moderate level.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The opportunity for solitude and primitive recreation within this roadless area is moderate. Because of the sights and sounds of nearby management activities, the sounds of boat use in Twelvemile Arm, and the chance of encountering other people along the streams, the opportunity is considerably reduced.

There are opportunities for primitive recreation at saltwater and upland recreation sites; however, because these sites are not very isolated from the community of Hollis and the Prince of Wales Island road system, these opportunities are limited. The topography of the area does not make travel particularly challenging, but the presence of black bears presents a degree of challenge.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	23,072	67%
Semi-Primitive Motorized (SPM)	2,961	9%
Roaded Natural (RN)	232	1%
Roaded Modified (RM)	8,063	23%

The area contains 12 inventoried recreation places, which cover 23,530 acres, or 69 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	4	15,801
SPM	1	818
RN	1	232
RM	11	6,679

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

Dispersed recreation is an important use in this area. One Duck Trail and Shelter is a Forest Service maintained facility within the roadless area and is popular for it panoramic views and hunting opportunities. Winter recreation is also popular at One Duck. The convenient road and boat accesses have made such places as Indian Creek, Twelvemile Arm, and other streams and waterways popular fishing and hunting places. The Harris River is located just north of the roadless area and provides fishing, camping, and hunting opportunities.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The Twelvemile area was part of the larger Polk Roadless Area in 1989 and was divided into three new areas in 1996 but no new rating was done. The area was given rating of 16 for this update to the AMS. This rating is reflective of the ongoing developments in the area and on adjacent private lands.

(4) Ecologic and Geologic Values: The Twelvemile Roadless Area is not directly connected to any other roadless areas on Prince of Wales Island; it is separated from them by roaded areas or saltwater inlets and sounds. The area contains patchy areas of productive old-growth forest; these areas are fragmented by muskeg, fens, scrub-shrub wetlands, forested wetlands, alpine shrublands, and lakes and ponds. The largest blocks of old growth are along both shores of Twelvemile Arm and in the Old Franks Creek, Indian Creek, and Harris River watersheds.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 621, 622, and 624, which cover the western two-thirds of the area, as primary salmon producers. VCUs 621 and 622, which cover the Twelvemile Arm watersheds including Indian Creek and the Harris River, were also listed as primary sportfish producers.

The streams in this area provide habitat for coho, pink, and chum salmon, cutthroat and steelhead trout, and Dolly Varden char. The Anadromous Waters Catalogue (ADF&G, 2000) shows a number of fish-bearing streams in this area, including Indian Creek, Old Franks Creek, Kina Creek, and upper Cabin Creek. Indian Creek provides habitat for all the species listed above. Old Franks Creek and upper Cabin Creek only provide habitat for coho salmon. Kina Creek is inhabited by coho salmon, cutthroat trout, and Dolly Varden char. The Old Franks drainage has had fish enhancement activities. Two fish ladders exist in the vicinity of Mary's Lake.

(b) Wildlife Resources: This area has high populations of Sitka black-tailed deer, black bear, wolves, otter, marten, mink, and common waterfowl. Based on harvest data compiled from 1985 to 1994, VCUs 619 and 634, covering the eastern portion of the area along Cabin Creek and Polk Inlet and northwest portion along Twelvemile Arm, were identified among the top 25 percent of black bear harvest areas on the Tongass (ADF&G, 1998). Sensitive species that potentially occur here include Peale's peregrine falcon, Queen Charlotte goshawk, and the trumpeter swan. Brown bear, moose, and mountain goats are not known to inhabit this area. The East Shore Twelvemile/Old Franks, West Shore Twelvemile/Indian Creek, and the Twelvemile/Trocadero old-growth blocks; and the Polk Inlet/Cabin Creek, One Duck/Twentymile, Harris River, and Wolf Lake/Hollis/Indian Creek old-growth corridors, are considered important as old-growth blocks and corridors (USDA Forest Service, 1996).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, nine sensitive plant species are known or suspected to occur in the Craig Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. However, limited karst topography exists in the Cave Creek drainage, southwest of Twelvemile Arm and just outside the roadless area. There are no glaciers or unique geologic features known in this area.

(5) Scientific and Educational Values: There are no special scientific or educational values known for the area. However, the area is readily accessible from the road system and by boat from Hollis, and from the road system by other Prince of Wales Islands communities.

(6) Scenic Values: When viewing from Twelvemile Arm, the area appears in a relatively natural condition, even though the keen observer can identify the results of older beach logging. The exception is when looking east in upper Twelvemile Arm, where the area provides a natural backdrop to visible timber harvest activities. When viewing this area from Hydaburg Road, a natural appearance is predominant, despite surrounding developments.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Hydaburg Road #13; Kassan Bay, a part of the Alaska Marine Highway; and the community of Hollis.

This roadless area was inventoried as Variety Class B, which possesses landscape characteristics common for the character type. The Existing Visual Condition (EVC) for approximately 67 percent of this area was listed as EVC I. Land in EVC I displays a natural landscape that has remained unaltered by human activity. Approximately 11 percent of the area was inventoried in EVC III, in which the average person notices changes in the landscape, but they do not attract significant attention. Another 13 percent of the area was rated as EVC IV, in which changes in the landscape are easily noticed by the average visitor, and may attract some attention. Approximately 9 percent of this roadless area is categorized in EVC V, where changes to the landscape are obvious to the average visitor.

(7) Social, Cultural, and Historical Values: The Polk Inlet and Twelvemile Arm areas were important locales of traditional use by the Haida Native people and before them, prehistoric cultures. The Kaigani Haida are

recognized as having the rights to much of the lower half of Prince of Wales Island at historic contact (USDA Forest Service, 1995). The two remaining Haida villages are located just outside the roadless area at Hydaburg and Kasaan. Historic use of Twelvemile Arm included hunting, trapping, fishing, and gardening. Most of these activities were concentrated around the Harris River and the present day location of Hollis (USDA Forest Service, 1995). The Haida Native Corporation made large land entitlement selections to the south of the roadless area and the Sealaska Native Corporation owns land along the northeastern border.

The Twelvemile area has historically been a primary entry to Prince of Wales Island. The community of Hollis lies less than 1 mile north of the roadless area. Hollis began as a mining community, but it soon became the boat entry terminal through Kasaan Bay. Currently, Hollis is the only Alaska Marine Highway stop on the Prince of Wales Island. Mining, trading/supply, boat repair, and, more recently, timber and tourism, have been the influences on the general vicinity of the roadless area. Dispersed recreation is an important use in this area. The convenient road and boat accesses have made such places as the Harris River, Indian Creek, Twelvemile Arm, and other streams and waterways popular fishing and hunting places.

Available information indicates that substantial subsistence activities occur in the area, especially along Twelvemile Arm and near the adjacent road system. The area is important to residents of Hollis, Klawock, Craig, Hydaburg, and Kasaan, as well as other Prince of Wales Island communities. VCUs 621 and 624, along Twelvemile Arm and in the southwestern portion of the area, were listed among the VCUs with the highest community fish and wildlife values by ADF&G (1998). VCUs 620 and 622 were listed in the third group of most important VCUs. All VCUs in the roadless area were listed among those VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The boundaries of the area are partly natural, consisting of the saltwater of Twelvemile Arm. However, most of the boundaries consist of developed areas, many of which penetrate the roadless area. Because of the degree of fragmentation, the proximity of ongoing management activities, and the proximity of the town of Hollis, the area would be difficult to manage as wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: There is some opportunity to manage this area for developed and dispersed recreation. There is opportunity and an identified need for trails. There is potential to place a public recreation cabin on One Duck Trail to promote winter recreation in the area. Twelvemile Arm just outside the roadless area, has been identified as a potential area to develop a campground and/or walk-in public recreation cabin.

The proximity of this area to Hollis, the Prince of Wales Island road system, and to Ketchikan, coupled with the variety of recreation opportunities offered by the area, have caused recreation management to be highlighted in the long-term planning for management of this area.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation or management in an unroaded condition.

(3) Fish Resources: The recently completed fish habitat inventory indicates that there is excellent potential for salmon enhancement projects, such as constructing fish passes, on several of the streams within the area. The Old Franks drainage has had fish enhancement activities. Two fish ladders exist in the vicinity of Mary's Lake.

(4) Wildlife Resources: There are no long-range plans for wildlife habitat improvement projects.

(5) Timber Resources: There are 11,532 acres mapped as productive old growth in the roadless area. In addition, 980 acres mapped as second-growth forest have resulted from beach and helicopter logging. Of these acres, 8,671 acres are categorized as tentatively suitable for timber production. Based on the current Forest Plan LUDs, (and estimated falldown and scheduling reduction factors), 1,035 acres or 3 percent of this roadless area are

estimated to be suitable for timber production. Approximately 218 of the suitable acres are mapped as high-volume old growth; of these acres, 14 are mapped as high-volume, coarse-canopy old growth.

Timber harvest has been occurring along much of the perimeter of the roadless area for many years causing it to shrink in size. The Polk Inlet Project (USDA Forest Service, 1995) has recently been implemented and has reduced the size of the area. Good potential exists to manage much of this area for its timber potential.

(6) Fire, Insects, and Disease: The area has no significant fire history, insects, and disease. Endemic tree diseases common to Southeast Alaska are present.

(7) Minerals: Mineral development potential is very low. This area contains 4,658 acres of land identified as a mineral activity tract with 3,932 acres having high and 726 acres having low potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). In addition, this area contains 34,333 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991) that are considered to have low potential for development.

(8) Transportation and Utilities: There are existing roads adjacent to the area, which tie into the island road system. No transportation or utility corridors are planned for this area other than for the harvest of local timber.

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: The area contains no Research Natural Areas. The area has not been specifically identified for any scientific studies.

(11) Land Use Authorizations: There are no land use authorizations currently within this roadless area.

(12) Land Status: About 23 acres, primarily located along the perimeter of the area, are non-National Forest System land. A small tract in the southern part of the roadless area is part of a large encumbered area adjacent to land owned by the Sealaska Regional Corporation.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives local use for subsistence and recreation activity.

(b) Congressional Interest: Two bills from the U.S. House of Representatives included wilderness proposals for Southeast Alaska. In 1989, HR 987 did not include this area. In 2001, HR 2908 did not propose the area for wilderness, but did propose it to be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

(c) Public Input During Forest Plan Revisions and Appeals: No specific recommendations for wilderness were made. A group of Hollis residents proposed a “bio-buffer” around Hollis, including parts of VCUs 621 and 622 in the roadless area. Several commenters requested that Indian Creek be managed for primitive recreation or as a natural area. Other commenters believed that Management Area K17, which covers most of the roadless area, should remain in timber production.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: Some comments on the Polk Inlet Project desired no new roads in the project area, including the roadless area. Others supported continued timber harvest and road development.

(f) Public Input Expressed During Supplemental EIS Process: SEACC recommended this area for permanent protection through LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 534 for permanent protection as LUD II.

(2) Nearby Roadless and Wilderness Areas and Uses: The Twelvemile Roadless Area is not directly connected to any other unroaded areas. It is separated from the nearby Kasaan Bay (536), Soda Bay (505), and McKenzie (519) Roadless Areas by roaded areas. The Karta Wilderness and associated Roadless Area (510) is located approximately 2 miles to the northwest across Twelvemile Arm. The South Prince of Wales Wilderness is located 15 miles to the south.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	210	230
Ketchikan (Pop. 14,070)	40	45
Wrangell (Pop. 2,308)	90	180
Petersberg (Pop. 3,324)	110	180

The nearest stop on the Alaska Marine Highway is Hollis.

(4) Relative Contribution to the National Wilderness Preservation System: The Twelvemile Roadless Area is located on the east-central part of Prince of Wales Island. It is bounded by roaded areas with the exception that Twelvemile Arm occupies part of the northern border. The roadless area is characterized by moderate topography. Most of this roadless area consists of rolling terrain; however, there are a few higher ridges with elevations ranging to above 2,400 feet. Old Franks and Indian Creeks are the largest streams occupying portions of the area.

The area itself is mostly unmodified, however it is influenced by nearby developments. The natural integrity and apparent naturalness of the area is moderate. The opportunity for solitude and primitive recreation is moderate.

None of the landscape is considered distinctive for the character type from a scenery standpoint. There are no known ecologic, geologic, scientific, or cultural features of significance in this roadless area.

The roadless area includes about 5,031 acres of high-volume, old-growth forest. Of these acres, approximately 1,453 are mapped as high-volume, coarse-canopy old growth.

The Twelvemile Roadless Area is in the North Central Prince of Wales Island Biogeographic Province and makes up about 2 percent of the province. It is one of 15 inventoried roadless areas (small parts of four other roadless areas area in the province) found in the province and that make up about 44 percent of the province. The Karta River Wilderness represents about 3 percent of the province. This province also contains the Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and the Salmon Bay Congressionally-designated LUD II areas, which make up about 5 percent of the area, and are managed to remain roadless.

The Twelvemile Roadless Area lies within two ecological sections; it represents 4 percent of the Prince of Wales Mountains Ecological Section and 0.1 percent of the Kupreanof Lowlands Ecological Section. These ecological sections contain relatively low representation in existing wilderness (8 and 1 percent, respectively) and LUD II (3 and 1 percent, respectively), but are well represented in other existing non-development LUDs (22 and 33 percent, respectively).

Nearly all (98 percent) of the roadless area is in the Central Prince of Wales Volcanics Ecological Subsection; this portion of the roadless area represents 7 percent of the entire ecological subsection. Approximately 8 percent of this ecological subsection is located in existing wilderness and another 23 percent is protected by other existing non-development LUDs. The Skowl Arm Till Lowlands Ecological Subsection covers 2 percent of the roadless area; this portion of the roadless area represents 1 percent of the entire ecological subsection, none of which is in existing wilderness or LUD II, but 29 percent is protected by other existing non-development LUDs. Less than 1 percent of the roadless area is in the Hetta Inlet Metasediments Ecological Subsection. This portion represents less than 0.1 percent of the entire ecological subsection, 2 percent of which is in existing wilderness, 9 percent in LUD II, and 14 percent is protected by other existing non-development LUDs.

The Twelvemile Roadless Area is rated at 16 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 98th from the highest (along with 4 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for managing this roadless area in an unroaded condition, but little support for designating it as wilderness. There are no known ecologic, geologic, scientific, or cultural features of significance in this roadless area. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Designation of the area would add Congressional protection to about 1 percent of the Skowl Arm Till Lowlands Ecological Subsection, none of which is currently in wilderness or LUD II. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low.

V. Environmental Consequences

The Twelvemile Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. About 58 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 42 percent of the roadless area. The land in the development LUDs includes an estimated 1,035 acres that are suitable for timber production (2 percent of the suitable acres on the Craig Ranger District). Approximately 14 of the suitable acres are classified as high-volume, coarse-canopy old growth. Timber sales authorized under the Polk Inlet FEIS would continue, including those that are under contract. This area contains 4,658 acres of land identified as a mineral activity tract with 3,932 acres having high and 726 having low potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains 34,333 acres of undiscovered locatable mineral resources that are considered to have low potential for development. Recreation and special use programs would continue. The values associated with the natural settings of the roadless area could be affected by ongoing developments allowed by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Mineral prospecting and development, special uses, and recreation programs would continue. No timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the old growth values, would be provided long-term protection if designated LUD II. Designation of the area would add Congressional protection to about 1 percent of the Skowl Arm Till Lowlands Ecological Subsection, none of which is currently in wilderness or LUD II.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Mineral prospecting and development, special uses, and recreation programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. No timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the old growth values, would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to about 1 percent of the Skowl Arm Till Lowlands Ecological Subsection, none of which is currently in wilderness or LUD II.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 534 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								34,333
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	19,780	19,780	19,780	19,780	19,780		19,780	
Semi-remote Recreation	3	3	3	3	3		3	
Recommended LUD II						34,333		
LUD II						0		
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	62	62	62	62	62		62	
Modified Landscape	720	720	720	720	720		720	
Timber production	13,769	13,769	13,769	13,769	13,769		13,769	
TOTAL	**34,333**	**34,333**	**34,333**	**34,333**	**34,333**	**34,333**	**34,333**	**34,333**
Suitable Timber Lands	1,035	1,035	1,035	1,035	1,035	0	1,035	0

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Carroll (535)

ACRES (NFS): 11,180

BIOGEOGRAPHIC PROVINCE: Revilla Island/Cleveland Peninsula

ECOLOGICAL SECTION: Inside Passage Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 16

I. Overview and Description

(1) Location and Access: The area is located on Revillagigedo Island (also known as Revilla Island). The area is bordered to the north, east, and part of the west by areas developed for forest management. Developed non-National Forest System lands border the area to the south and part of the west. The area is located on a peninsula bordered by George Inlet and Carroll Inlet to the west and east, respectively. The city of Ketchikan is on the Alaska Marine Highway and with regular air service, is located approximately 5 miles southwest of the area.

Access to the area is via boat, helicopter, or floatplane. Forest roads border the area to the north, west, and part of the west and provide access to the edge of the area. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

(2) History: Prehistoric and historic Alaska Native cultures used this roadless area. A number of prehistoric and historic sites have been identified through archeological survey, oral history, and historic documentation. In the 1950s, commercial-scale timber harvest was initiated on Revilla Island. In recent times, the State and Native Corporations have received extensive land selections along George and Carroll Inlets and ongoing development has occurred on these lands.

(3) Geography and Topography: This area, characterized by rugged terrain, steep mountain slopes, and lakes, is located on the peninsula separating George and Carroll Inlets. Forest roads, timber harvest areas, and non-National Forest System lands separate the area from saltwater on all sides. The area includes about 85 acres of alpine, 40 acres of rock terrain, and 300 acres of lakes.

(4) Ecosystem:

(a) Classification: Biogeographic Province. This area is part of the Revilla Island/Cleveland Peninsula Province. This province is characterized by a variable climate with wet conditions on land near the outer coast, with much cooler conditions near the mainland. Revilla Island has many exceptional estuaries and is influenced by human activities.

Ecological Section/Subsection. The Carroll Roadless Area is contained entirely within Inside Passage Fjordlands Ecological Section (M247E), Traitors Cove Metasediments Ecological Subsection (see table below). The Traitors Cove Metasediments Ecological Subsection, composed mostly of glacially carved sedimentary rock, is the principal geologic formation of western Revillagigedo Island. Steep slopes give way to deeply incised valleys. Landslides are a common occurrence. Productive hemlock and Sitka spruce forests grow on well-drained soils on slopes. Forested wetlands are found in poorly drained soils along the valley floors (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Inside Passage Fjordlands	Traitors Cove Metasediments	100%

(b) Soils: The highly organic, low clay content soils found in this area are generally formed over bedrock and are typically about 40 inches deep.

(c) Vegetation: This area is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce, moderate cedar component, also the northern range of Pacific silver fir and Pacific yew. Less than 100 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 10,442 acres mapped as forestland, of which 4,454 acres or 43 percent are mapped as productive old-growth forest. Of the productive old growth, 1,781 acres or 40 percent are mapped as high-volume old-growth forest. The productive old growth includes about 34 acres of high-volume, coarse-canopy old growth. There are 25 acres of second growth mapped in this area.

(d) Fish Resources: According to the Anadromous Waters Catalogue (ADF&G, 2000), there is only one small stretch of Class I stream in this roadless area. Headwaters for a number of streams, including Gunsight Creek, fall within the boundaries, as does Buckhorn Lake. Streams in this area support pink, chum, and coho salmon , as well as cutthroat and steelhead trout, and Dolly Varden char.

(e) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, wolves, otter, marten, beaver, mink, eagles, loon, and common waterfowl. Trumpeter swans use the major saltwater inlets and freshwater lakes as resting areas during their migrations. Old-growth forests in the area also provide habitat for Canada geese, northern goshawk, and marbled murrelet. Moose, brown bear, and mountain goats have not been reported in this area.

(5) Management Direction and Current Uses: This roadless area was allocated to two Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These two LUDs are Timber Production and Modified Landscape.

LUD	Acres
Timber Production	7,993
Modified Landscape	3,187

All land in this roadless area was allocated to a development LUD (Timber Production, Modified Landscape). Most of this roadless area, approximately 71 percent, was allocation to the Timber Production LUD. The Modified Landscape LUD was assigned to approximately 29 percent of the roadless area.

There are no developed recreation facilities in the area. The Sea Level Timber Sale FEIS (USDA Forest Service, 1999) identified Puzzle Lake, located in the north part of this roadless area, as a potential recreation place. Some subsistence use may occur in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that three of the four VCUs partially located within this area are subsistence use areas with a high sensitivity to disturbance.

The Sea Level Timber Sale FEIS (USDA Forest Service, 1999) proposed making approximately 75 million board feet (MMBF) of timber available in three sales. The Buckdance Sale is partly within the Carroll Roadless Area and involves road construction. All sales associated with the Sea Level Timber Sale FEIS are currently under contract. One of these sales is within this roadless area. The Topper Timber Sale, which is scheduled for 2009, may involve a portion of this roadless area.

(6) Appearance (Apparent Naturalness): The area itself appears unmodified and in a natural condition. However, the area is surrounded by evidence of timber management activities which likely affects the perceived naturalness of the area.

(7) Surroundings (External Influences): The area is bordered to the north, east, and part of the west by developed areas. Non-National Forest System lands primarily owned by the Cape Fox Village Corporation border the area to the south and part of the west. This area has also been developed. Aircraft noise can be heard virtually everywhere year-round.

(8) Attractions and Features of Special Interest: There are no features of special interest in this roadless area. The area contains three inventoried recreation places that cover approximately 2,103 acres, or 19 percent of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The Carroll Roadless Area did not exist in 1989. The north part of this area was formerly part of the Revilla Roadless Area (#524). The south part of the area was part of the South Revilla Roadless Area (#523). Several smaller areas along developed boundaries have been excluded between the Draft and Final SEIS to improve manageability in those areas.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area itself appears unmodified and in a natural condition. However, the area is surrounded by developed areas, which affect the natural integrity and apparent naturalness of the area and the capability of the area for wilderness classification. Overall, the area has high natural integrity and moderate apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: The area provides low opportunity for solitude and moderate opportunity for primitive recreation within the area. Aircraft noise can be heard virtually everywhere year-round. There are no developed recreation facilities in the area. There was no outfitter/guide use identified in this area in 2000.

The area provides primarily semi-primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	8,430	75%
Semi-Primitive Motorized (SPM)	262	2%
Roaded Modified (RM)	2,488	22%

The area contains three inventoried recreation places, which cover 2,103 acres, or 19 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
SPNM	1	1,459
SPM	1	262
RM	3	381

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

The Sea Level Timber Sale FEIS (USDA Forest Service, 1999) identified Puzzle Lake, located in the north part of this roadless area, as a potential recreation place. Potential uses identified for Puzzle Lake included developed camping and lake fishing.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The Carroll Roadless Area was included as part of two other roadless areas in 1989. As a result, it was not rated in 1989. The area was, however, rated for this updated version of the AMS. Based on this evaluation, the area was given a rating of 16.

(4) Ecologic and Geologic Values: This roadless area is separated from the North Revilla Roadless area (#526) by developed areas and private land. It is not part of a larger unroaded area.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed VCUs 748 along George Inlet and 753 along Carroll Inlet as primary salmon producers, and VCU 748 as a primary sportfish producer. Portions of these VCUs are in this roadless area. The other VCUs are secondary salmon producers (ADF&G, 1998).

According to the Anadromous Waters Catalogue (ADF&G, 2000), there is only one small stretch of Class I stream in this roadless area. Headwaters for a number of streams, including Gunsight Creek, fall within the boundaries, as does Buckhorn Lake. Streams in this area support pink, chum, and coho salmon, as well as cutthroat trout, steelhead trout, and Dolly Varden char.

Gunsight Creek is a steep, deeply entrenched stream with minor anadromous fish potential. The Anadromous Waters Catalogue (ADF&G, 2000) indicates that coho and pink salmon inhabit this stream. Information from ADF&G escapement surveys indicates that between 1993 and 1998, average peak escapement for Gunsight Creek was 3,175 pink salmon. Buckhorn Lake has stocked populations of rainbow trout. Barrier falls in the lower reach of Buckhorn Lake Creek block upstream passage for pink, chum, and coho salmon inhabiting the lower reaches. There is no enhancement potential for this stream due to numerous waterfalls (USDA Forest Service, 1991).

(b) Wildlife Resources: This area has populations of Sitka black-tailed deer, black bear, wolves, otter, marten, beaver, mink, eagles, loon, and common waterfowl. Based on data compiled from 1985 to 1994, VCUs 748 (along Georges Inlet) and 752 (along Carroll Inlet) are listed among the top 25 percent of VCUs for black bear harvest (ADF&G 1998). Old-growth forests also provide habitat for Canada geese, northern goshawk, and marbled murrelet.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species which potentially may occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species may occur in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, eight sensitive plant species are known or suspected to occur in the Ketchikan Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There is a small area of high vulnerability karst in this roadless area, in the mountainous region southwest of Buckhorn Lake. The karst resources are mapped as 101 acres, or 1 percent, of the roadless area. About two-thirds of the karst is mapped as high vulnerability karst. There are no glaciers or unique geologic features here.

(5) Scientific and Educational Values: There are no known features of ecologic, geologic, scientific, or cultural significance. There are no Natural Areas in this roadless area.

(6) Scenic Values: This roadless area is part of the Coastal Hills visual character type, which is characterized by moderately steep landforms, predominantly rounded summits, elevations up to around 2,200 feet, and flat-floored, U-shaped valleys.

Visual Priority Routes and Use Areas identified by the Forest Plan that are in the vicinity of the area include Carroll Inlet and George Inlet (Saltwater Use Areas).

Approximately 100 percent of this area was rated as Variety Class B, possessing landscape characteristics that are common for the character type. Most of this area, approximately 88 percent, was inventoried as Type I Existing Visual. Condition, where the natural landscape has remained unaltered by human activity. The remaining 12 percent was inventoried as Type V Variety Class, where changes to the landscape are obvious to the average visitor.

(7) Social, Cultural, and Historical Values: Prehistoric and historic Alaska Native cultures used this roadless area. A number of prehistoric and historic sites have been identified through archeological survey, oral history, and historic documentation. In the 1950s, commercial scale timber harvest was initiated on Revilla Island. In recent times, the State and Native Corporations have received extensive land selections along George and Carroll Inlets and ongoing development has occurred on these lands.
Some subsistence use may occur in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that three of the four VCUs partially located within this area (746, 748, and 753) are listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas. One of the VCUs partially located in this area (VCU 753 along Carroll Inlet) was included among the highest value community use areas. Another VCU (VCU 747) was identified in the second tier of highest value community areas (ADF&G, 1998).

The Sea Level Timber Sale FEIS (USDA Forest Service, 1999) proposed making approximately 75 million board feet (MMBF) of timber available in three sales. The Buckdance Sale is partly within the Carroll Roadless Area and involves road construction. All sales associated with the Sea Level Timber Sale FEIS are currently under contract. One of these sales is within this roadless area. The Topper Timber Sale, scheduled for 2009, may involve a portion of this roadless area.

(8) Manageability as Wilderness and Boundary Conditions/Changes: This irregularly shaped area is bordered to the south and most of the west by non-National Forest System lands. These boundaries are straight lines that do not follow natural topographic features. Much of the adjacent area of the roadless area has been developed. This area would be difficult to manage as wilderness.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, including Tourism Potential: The Sea Level Timber Sale FEIS (USDA Forest Service, 1999) identified Puzzle Lake, located in the north part of this roadless area, as a potential recreation place. Potential uses identified for Puzzle Lake included developed camping and lake fishing.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: There is some potential for fish habitat improvement on streams within the area. However, no projects have been identified at this time.

(4) Wildlife Resources: No wildlife enhancement projects are planned for this roadless area.

(5) Timber Resources: There are 4,454 acres mapped as productive old growth and 25 acres mapped as second growth due to harvest in the roadless area. Of these acres, 2,659 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,744 acres or 15 percent of this roadless area are estimated to be suitable for timber production. Approximately 724 of the suitable acres are mapped as high-volume old growth; of these acres, 9 are mapped as high-volume, coarse-canopy old growth.

The Sea Level Timber Sale FEIS (USDA Forest Service, 1999) proposed making approximately 75 million board feet (MMBF) of timber available in three sales. The Buckdance Sale is partly within the Carroll Roadless Area and involves road construction. All sales associated with the Sea Level Timber Sale FEIS are currently under contract. One of these sales is within this roadless area. The Topper Timber Sale, scheduled for 2009, may involve a portion of this roadless area.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present. There are no known epidemic disease occurrences.

(7) Minerals: Mineral development potential in this area is very low. This area contains 11,144 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); all of which are considered to have very low potential for development.

(8) Transportation and Utilities: There are no transportation or utility projects proposed for this area.

(9) Water Availability and Use: There are no developed recreation cabins or other facilities to create a demand for water in this area. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

(10) Areas of Scientific Interest: There are no areas of scientific interest in this area.

(11) Land Use Authorizations: There are no land use authorizations in this area.

(12) Land Status: No private land inholdings exist within the roadless area boundary. The area is, however, bordered to the south and west by non-National Forest System lands. These boundaries are irregularly shaped and do not conform to natural topographic features. Most of the roadless contains encumbered land.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The area receives little local use for subsistence or recreation and this is usually associated with the adjacent road system.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Carroll Roadless Area. In 2001, HR 2908 identified the area as a proposed LUD II addition.

(c) Public Input During Forest Plan Revisions and Appeals: Revilla Island was specifically addressed in public input received during the Forest Plan revision. Several commenters asked for the protection of natural values, especially roadless recreation in several areas including Carroll and George Inlets. Others felt that better road systems on Revilla Island would benefit Ketchikan residents by creating more recreation opportunities. A petition signed by over 700 Ketchikan residents recommended that existing recreation opportunities on lands near Ketchikan be increased by expanding the existing road system to connect with existing roads in George Inlet, Carroll Inlet, and Thorne Arm. A few other commenters opposed expansion of the road system. Timber industry representatives wanted timber harvest emphasized in certain areas or throughout Revilla Island.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: Part of the Carroll Roadless Area is located within the project area for the Sea Level Timber Sale EIS. A total of 15 public comments

were received on the Sea Level Timber Sale Draft EIS (USDA Forest Service, 1999). Comments that pertained to the potential effects of road building included the following. Road building and logging will affect the Misty Fiords National Monument Wilderness. Road construction linking Ketchikan and Sea Level would increase access for hunters. The issue of the Bradfield Road Transportation link and additional road building should be addressed. The long-term effects of roads on wildlife needs to be addressed in detail.

(f) Public Input Expressed During Supplemental EIS Process: The Alaska Department of Fish and Game rated the Carroll roadless area as the fifth highest priority for protection in the Ketchikan Area (outside of POW Island). This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

SEACC recommended this area for LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 535 for permanent protection as LUD II.

(2) Nearby Roadless and Wilderness Areas and Uses: Misty Fiords National Monument Wilderness is located approximately 7 miles east of the area. The area is surrounded by developed areas. Nearby roadless areas include North Revilla (#526) to the north, northwest, and east; South Revilla (#523) to the south; and Revilla (#524) to the west and southwest.

(3) Distance From Population Centers (Accessibility): Approximate distances from population centers are as follows:

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	230	270
Ketchikan (Pop. 14,070)	5	20
Wrangell (Pop.2,308)	75	120
Petersburg (Pop. 3,324)	110	150

The nearest stop on the Alaska Marine Highway is Ketchikan.

(4) Relative Contribution to the National Wilderness Preservation System: The Carroll Roadless Area is located on Revillagigedo Island (also known as Revilla Island). The area is bordered to the north, east, and part of the west by areas developed for forest management. Developed non-National Forest System lands border the area to the south and part of the west. The area is located on a peninsula bordered by George Inlet and Carroll Inlet to the west and east, respectively. The area is characterized by rugged terrain, steep mountain slopes, and lakes.

The area itself is mostly unmodified, however the developments adjacent to the area influence the natural integrity and apparent naturalness. The natural integrity is rated as high and the apparent naturalness is rated as moderate for the area. The opportunity for solitude is low and the opportunity for primitive recreation is moderate.

None of the landscape is considered to be distinctive for the character type from a scenery standpoint. There are no known features of ecologic, geologic, scientific, or cultural significance.

The roadless area includes about 1,781 acres of high-volume, old-growth forest. Of these acres, approximately 34 are mapped as high-volume, coarse-canopy old growth.

The Carroll Roadless Area is classified as being in the Revilla Island/Cleveland Peninsula Biogeographic Province and makes up about 1 percent of the province. It is one of 12 inventoried roadless areas found within the province which make up about 60 percent of the province. Part of the Misty Fiords National Monument Wilderness is located in this province and makes up about 18 percent of the province. The province also includes two Congressionally designated LUD II areas (Naha and Anan) which make up about 5 percent of the province.

The Carroll Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents 0.4 percent of the ecological section. Approximately 20 percent of the Inside Passage Fjordlands Ecological Section is in existing wilderness, 2 percent is in existing LUD II, and 30 percent is protected by other existing non-development LUDs.

All (100 percent) of the roadless area is in the Traitors Cove Metasediments Ecological Subsection; this portion represents 3 percent of the entire ecological subsection, 10 percent of which is protected in existing LUD II and 26 percent in other existing non-development LUDs.

The Carroll Roadless Area was rated 16 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 98th from the highest (along with 4 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing this area in an unroaded condition, but little support for designation of this area as wilderness. Designation would create a relatively small wilderness with no known features of ecologic, geologic, scientific, or cultural significance, and that is also heavily influenced by developments and activities in nearby areas. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Overall, the factors identified here indicate that the relative contribution to the National Wilderness Preservation System would be very low.

V. Environmental Consequences

The Carroll Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Timber harvest and road development could occur within all of the roadless area. The land in the development LUDs includes an estimated 1,744 acres that are suitable for timber production (3 percent of the suitable acres on the Ketchikan/Misty Fiords Ranger District). Approximately 9 of the suitable acres are classified as high-volume, coarse-canopy old growth. Ongoing timber sales authorized under the Sea Level FEIS would continue, including those that are under contract. This area contains 11,144 acres of undiscovered locatable mineral resource; all of which are considered to have very low potential for development. Recreation and special use programs would continue. The values associated with the natural settings of the roadless area could be affected by ongoing developments allowed by the Forest Plan.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. Minerals, special uses, and recreation programs would continue. No timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the old growth values, would be provided long-term protection if designated LUD II.

With Alternative 8, the entire roadless area would be converted to Recommended Wilderness. Minerals, special uses, and recreation programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. No timber harvest would be allowed. The values associated with the natural settings of the roadless area, including the old growth values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 535 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								11,180
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat								
Semi-remote Recreation								
Recommended LUD II						11,180		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape	3,187	3,187	3,187	3,187	3,187		3,187	
Timber production	7,993	7,993	7,993	7,993	7,993		7,993	
TOTAL	**11,180**	**11,180**	**11,180**	**11,180**	**11,180**	**11,180**	**11,180**	**11,180**
Suitable Timber Lands	1,744	1,744	1,744	1,744	1,744	0	1,744	0

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Quartz (577)

ACRES (NFS): 146,657

BIOGEOGRAPHIC PROVINCE: South Misty Fiords

ECOLOGICAL SECTION: Coast Mountain Batholith Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 25

I. Overview and Description

(1) Location and Access: The area lies in the middle of the mainland portion of Misty Fiords National Monument about 50 air miles east of Ketchikan. Access is by boat and foot or by helicopter. Floatplanes cannot land in the area due to the lack of lakes large enough to accommodate them. Floatplanes provide access to the saltwater shoreline. There are no places suitable for landing wheeled airplanes. An access road extends about 11 miles through the area to the Quartz Hill Mine, which is centrally located on private land in the area. The mine and road are both excluded from the roadless area.

(2) History: This area is a part of Misty Fiords National Monument. ANILCA did not include this roadless area as wilderness because of the pending plans to develop the Quartz Hill molybdenum mine. Exploration of this deposit began in 1974. The operation was subsequently put on hold in October 1990 primarily because of economics. A number of prehistoric and historic sites have been identified through archeological surveys, oral histories, and other historical records.

(3) Geography and Topography: The area is extremely rugged and rises from saltwater to elevations over 5,000 feet. The area includes 8,166 acres of exposed rock, 12,636 acres of alpine, 4,376 acres of icefield or glacier, 314 acres of freshwater lakes, and 37 miles of saltwater shoreline.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the South Misty Fiords Biogeographic Province. Forest plant associations are more diverse than the other coastal provinces. The vegetation is less fragmented by ice and rock than in the North Misty Fiords Province.

Ecological Section/Subsection. The Quartz Roadless Area is contained entirely within the Coast Mountain Batholith Fjordlands Ecological Section (M247K), Misty Fiords Granitics Ecological Subsection (see table below). An extensive, mainland granitic batholith is the dominant feature of the Misty Fiords Granitics Ecological Subsection. Glaciers have scoured fjords, broad U-shaped valleys, cirques, and hanging valleys. Soils are shallow and relatively young, restricting forests to depositional areas. Substantial riparian wetlands, and in a few cases, riparian forests, have developed along the major rivers (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Coast Mountain Batholith Fjordlands	Misty Fiords Granitics	100%

(b) Soils: The soils in this area are moderately-deep loam with inclusions of glacial till and moraine deposits.

(c) Vegetation: Alpine vegetation (mapped as 12,636 acres) dominates above 2,500 feet elevation. Below that elevation the steep mountainsides are heavily marked with snowslide and landslide paths that

are typically covered with grass, alder, and brush. Occasionally, cottonwood trees may be found along the valley bottoms and floodplains. Approximately 435 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 90,860 acres mapped as forestland, of which 48,475 acres or 53 percent are mapped as productive old-growth forest. Of the productive old growth, 21,499 acres (44 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 4,610 acres of high-volume, coarse-canopy old growth. There is no mapped second growth in the area.

(d) Fish Resources: The waters of this area support chinook, sockeye, coho, pink, and chum salmon, as well as cutthroat and steelhead trout. The major fish producing streams in the area are Blossom River, Wilson River, Keta River, and Bartholomew Creek (ADF&G Anadromous Waters Catalogue, 2000).

(e) Wildlife Resources: A population of mountain goat ranges over the area, as do Sitka black-tailed deer, black and brown bear, wolves, and mink. The Wilson River area has high concentration of brown bear (USDA Forest Service, 1997).

(5) Management Direction and Current Uses: This roadless area was allocated to one Land Use Designation (LUD) in the 1997 Tongass Land and Resource Management Plan, National Monument (non-wilderness).

LUD	Acres
National Monument (non-wilderness)	146,657

The only LUD in this roadless area is the National Monument (non-wilderness) LUD, which is a non-development LUD. All of this roadless area is a part of the Misty Fiords National Monument.

A public use recreation cabin and hiking trail are located between Bakewell Arm and Bakewell Lake. Recreation use in the area is moderate according to cabin use figures for 2001. One outfitter/guide (bear hunting) operated in the area for 3 service days in 2000. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that the VCUs that comprise this area are typically not used for subsistence.

The molybdenum deposit at Quartz Hill, located near the center of this area on private land, is one of the largest known deposits in the world. It contains as much as 12 percent of the world's known reserves of molybdenum. Exploration of this deposit began in 1974 and continued until October 1990, when the operation was put on hold primarily due to economics. The access road to the mine is under special use permit.

A fish pass was constructed on Bakewell Creek in 1985.

(6) Appearance (Apparent Naturalness): Overall, this roadless area appears to be in a natural condition. The area is virtually unmodified with the exception of the Quartz Hill Mine and its access road, which runs along the Blossom River and the northeast shore of Wilson Arm. The mine and access road are both excluded from the roadless area. These developments affect the natural integrity of areas in the immediate vicinity, but they have a low overall effect on the area as a whole.

(7) Surroundings (External Influences): This area is contiguous to the rest of the Misty Fiords National Monument. The most significant external influence on the area is the noise and sight of large number of aircraft on flightseeing trips during the summer cruise ship season.

(8) Attractions and Features of Special Interest: The natural features of the area, the scenery, and the opportunity to see wildlife and to study the processes that formed this landscape may all be attractions. The area contains six inventoried recreation places, which cover 13,065 acres (9 percent) of the roadless area.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The Quartz Roadless Area boundary did not change between 1989 and 2003.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is virtually unmodified and has retained good natural integrity with the exception of the Quartz Hill Mine and its access road. This mine and access road are both excluded from the roadless area. These developments affect the natural integrity of areas in the immediate vicinity, but they have a low overall effect on the area as a whole. This area is suitable for wilderness classification based on its high natural integrity and very high apparent naturalness.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is outstanding opportunity for solitude and primitive recreation within the area, especially when the adjacent roadless lands are factored in. Aircraft on flightseeing trips can be heard and seen during the summer season. Present recreation levels are low. Generally, a person camped or traveling inland is unlikely to see others.

Due to the remoteness of the area, the minimal sights and sounds of human activity, the great physical challenge presented by the rugged terrain and dense vegetation, and the presence of black and brown bear, there are good opportunities for primitive recreation. One outfitter/guide (bear hunting) operated in the area for 3 service days in 2000. A public use recreation cabin and hiking trail are located between Bakewell Arm and Bakewell Lake. Because it is located inland, this area does not possess the variety of recreation attractions that are found in neighboring portions of the Monument, though the Wilson and Keta River corridors may have potential for hiking trails and offer good fishing and hunting opportunities.

The area provides primarily primitive recreation opportunities. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	108,796	74%
Semi-Primitive Non-Motorized (SPNM)	30,199	21%
Semi-Primitive Motorized (SPM)	6,473	4%
Roaded Modified (RM)	1,187	1%

The area contains 6 inventoried recreation places, which cover 13,065 acres (9 percent) of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	1	4,340
SPNM	3	3,859
SPM	2	4,488
RM	1	377

* Rec. Places may occur in more than one ROS Class; the sum of this column may exceed the total number of Rec. Places.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the Quartz Roadless Area was 23 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the

AMS. Based on this re-evaluation, the area was given a rating of 25. This rating better reflects the outstanding solitude and primitive recreation opportunities offered by the area and surrounding wilderness.

(4) Ecologic and Geologic Values: The Quartz Roadless Area is centrally located within the Misty Fiords National Monument Wilderness. The area and the surrounding wilderness are part of a much larger mainland, roadless area that extends from the southern tip of Southeast Alaska to Skagway.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment listed five VCUs (VCUs 815.9, 817, 818.9, 841.9 and 842.9, which cover most of the area) as primary salmon producers. Three VCUs (VCUs 817, 817.9, 818.9 and 826.9 along Wilson Arm and Wilson River) were listed as primary sportfish producers (ADF&G, 1998).

The waters of this area support chinook, sockeye, coho, pink, and chum salmon, as well as cutthroat and steelhead trout. The major fish producing streams in the area are Blossom River, Wilson River, Keta River, and Bartholomew Creek (ADF&G Anadromous Waters Catalogue, 2000).

(b) Wildlife Resources: A population of mountain goats range over the area, as do Sitka black-tailed deer, black and brown bear, wolves, and mink. The Wilson River area has high concentration of brown bear (USDA Forest Service, 1997).

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species may occur in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, eight sensitive plant species are known or suspected to occur in the Ketchikan Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There are no known karst or cave resources in this roadless area. There are a few small glaciers in the area, but there are no other unique geologic features.

(5) Scientific and Educational Values: There are opportunities to observe and study fish and wildlife and the various forces that formed this landscape. There are no Research Natural Areas in the Quartz Roadless Area. Ketchikan, the closest community with school-age children, is located approximately 70 water miles west of the area.

(6) Scenic Values: This roadless area is part of the South Misty Fiords Visual character type, which consists of large, massive landforms commonly rising to elevations of 7,000 feet, steep slopes or rock cliffs that plunge to saltwater, and deep, narrow saltwater Fiords that protrude into this land mass. Mountain ridges are generally rounded with occasional jagged peaks rising above the surrounding smoother ridge tops. The Quartz Roadless Area is fairly representative of this character type except for slightly lower elevations.

The area is virtually unmodified with the exception of the Quartz Hill Mine and its access road, which runs along the Blossom River and the northeast shore of Wilson Arm. This mine and access road are both excluded from the roadless area. These developments affect the scenic value of areas in the immediate vicinity, but have a low overall effect on the area as a whole.

There are no Visual Priority Routes or Use Areas located within or adjacent to the Quartz Roadless Area. All land in this roadless area has a Visual Quality Objective (VQO) of Retention because it is within the Misty Fiords National Monument. Activities on lands managed under the Retention VQO should not be visually evident to the casual observer.

Approximately 99 percent of this roadless area is inventoried as a Variety Class B, which possesses a level of landscape diversity common for the character type. There are notable scenic landscapes at the head of Bakewell Arm, at the head of Wilson Arm around the Wilson and Blossom River estuaries, and along certain portions of Boca de Quadra.

About 97 percent of this roadless area is in a Type I Existing Visual Condition (EVC) where the natural landscape has remained unaltered by human activity. The remaining 2 percent of the area is split among EVC IV and EVC V, where human alterations to the land are obvious or dominate the landscape.

(7) Social, Cultural, and Historical Values: This area is a part of Misty Fiords National Monument and centrally located in the Misty Fiords National Monument Wilderness. ANILCA did not include this roadless area as wilderness because of the pending plans to develop the Quartz Hill molybdenum mine. The molybdenum deposit at Quartz Hill, located near the center of this area, is one of the largest known deposits in the world. It contains as much as 12 percent of the world's known reserves of molybdenum. Exploration of this deposit began in 1974 and continued until October 1990, when the operation was put on hold, primarily due to economics. A number of prehistoric and historic sites have been identified through archeological surveys, oral histories, and other historical records.

A public use recreation cabin and hiking trail are located between Bakewell Arm and Bakewell Lake. Recreation use in the area is moderate according to use numbers for 2002. One outfitter/guide (bear hunting) operated in the area for 3 service days in 2000. The Tongass Fish and Wildlife Resource Assessment indicated that the VCUs that comprise this area are typically not used for subsistence. None of the VCUs in this area were listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas or among the VCUs with high community use values (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: The area is generally well defined by topographic features. The feasibility of managing this area in a roadless condition is high with the possible exception of the area adjacent to the Quartz Hill Mine.

III. Availability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

(1) Recreation, Including Tourism Potential: The area is best suited for dispersed recreation activities. The Wilson and Keta River corridors may have potential for hiking trails and offer good fishing and hunting opportunities.

(2) Subsistence Uses: The existing patterns of subsistence activities in the area would not be affected by wilderness designation.

(3) Fish Resources: The streams within the roadless area are important streams for salmon production. There may be some opportunity for fish habitat improvement projects within this roadless area. A fishpass on Bakewell Creek was completed in the late 1950s with improvements completed in 1989.

(4) Wildlife Resources: No wildlife enhancement projects are planned for this roadless area.

(5) Timber Resources: There are 48,475 acres mapped as productive old growth and no acres mapped as second growth due to harvest in the roadless area. None of these acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area, none of this roadless area is classified as suitable for timber production.

(6) Fire, Insects, and Disease: The area has no significant fire history. Endemic tree diseases common to Southeast Alaska are present; there are no known epidemic disease occurrences.

(7) Minerals: There has been much mineral exploration activity associated with the Quartz Hill molybdenum deposit. Exploration of this deposit began in 1974 and continued until October 1990, when the operation was put on hold. Statutory direction for the entire roadless area emphasizes development of the molybdenum deposit. Should mining begin in earnest its effects would encompass much of the area.

This area contains 2,227 acres of land identified as a mineral activity tract having a moderate potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). This area contains 94,913 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 94,781 of these acres are considered to have moderate potential for development.

(8) Transportation and Utilities: There are no proposed transportation or utility corridors within or adjacent to this area.

(9) Water Availability and Use: The public recreation cabin at Bakewell Lake is the only facility within this roadless area that could create a demand for water. There are no existing or planned hydroelectric or domestic water projects in the area. The Quartz Hill mine may use a lot of water if in operation.

(10) Areas of Scientific Interest: There are no areas of scientific interest in this area.

(11) Land Use Authorizations: Adjacent to the roadless area, a special use permit was issued to the Quartz Hill Mine for the construction and operation of a road and shore-related dock facilities.

(12) Land Status: The entire roadless area is a part of the National Forest System. The entire roadless area is also encumbered.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: Most of the area is used by local residents for recreation.

(b) Congressional Interest: In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Quartz Roadless Area. In 2001, HR 2908 identified the area as "Designated Wilderness or Monument." It also identified Wilson River and Blossom River, portions of which are located in this roadless area, for protection as Wild and Scenic Rivers.

(c) Public Input During Forest Plan Revision and Appeals: This area was not specifically addressed in public input received during the Forest Plan revision.

(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review: This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) Public Input Expressed for Project-level EISs and Other Input: This area is not within the study area of any recently completed project-level EISs.

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as having important fish and wildlife habitat and populations; although not a top priority for protection, it ranked in their top third among all roadless areas.

The Alaska Department of Fish and Game rated the Quartz roadless area as the sixth highest priority for protection in the Ketchikan Area (outside of POW Island). This rating is based on the VCUs with the

highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) noted that Roadless Area 577 is surrounded entirely by national monument wilderness and recommended it for permanent protection as wilderness.

Some individuals also recommended this area for permanent protection as wilderness.

(2) Nearby Roadless and Wilderness Areas and Uses: The Quartz Roadless Area is centrally located within the Misty Fiords National Monument Wilderness. The area and the surrounding wilderness are part of a much larger mainland, unroaded land area that extends from the southern tip of Southeast Alaska to Skagway.

(3) Distance From Population Centers (Accessibility):

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	300	380
Ketchikan (Pop. 14,070)	50	70

Ketchikan is the nearest stop on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The Quartz Hill Roadless Area lies in the middle of the mainland portion of Misty Fiords National Monument about 50 miles east of Ketchikan. An access road extends about 11 miles through the area to the Quartz Hill Mine, which is centrally located on private land in the area. The Quartz Roadless Area is extremely rugged and rises from saltwater to elevations over 5,000 feet.

The area is unmodified; however, the road and mining activity influence the area. The area has high natural integrity and very high apparent naturalness. The opportunity for solitude and primitive recreation is outstanding.

None of the landscape is considered distinctive for the character type from a scenery standpoint. There are a few glaciers located in the area. Mineralization is high in the area, and the Quartz Hill mine has one of the largest deposits of molybdenum known in the world.

The roadless area includes about 21,499 acres of high-volume, old-growth forest. Of these acres, approximately 4,610 are mapped as high-volume, coarse-canopy old growth.

The Quartz Roadless Area is classified as being in the South Misty Fiords Biogeographic Province and makes up about 16 percent of the province. It is the only inventoried roadless areas found within the province. Much of the Misty Fiords National Monument Wilderness is located in this province and makes up the remaining 84 percent of the province.

The Quartz Roadless Area lies completely within the Coast Mountain Batholith Fjordlands Ecological Section and represents 10 percent of the ecological section. The Coast Mountain Batholith Fjordlands Ecological Section is very well represented by existing wilderness (96 percent) and by other existing non-development LUDs (2 percent).

All (100 percent) of the roadless area is in the Misty Fiords Granitics Ecological Subsection, which represents 10 percent of the ecological subsection; 96 percent of the ecological subsection is protected in existing wilderness and 2 percent in other existing non-development LUDs.

The Quartz Roadless Area was rated 25 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 12th from the highest (along with 12 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing this area in an unroaded condition, and there is some support for designating it as wilderness. Designation would create a wilderness that would add to the Misty Fiords National

Monument Wilderness and would include areas of high mineralization in the proximity of the Quartz Hill property. Overall, the factors identified here indicate that the relative contribution to the National Wilderness Preservation System for this area would be high.

V. Environmental Consequences

The Quartz Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, 6, or 7 is implemented. All of the roadless area would be managed under non-development LUDs. The recreation, minerals, and special use programs would continue. This area contains 2,227 acres of land identified as a mineral activity tract having a moderate potential for experiencing mineral exploration and development of locatable minerals. This area contains approximately 94,913 acres of undiscovered locatable mineral resources; 94,781 of these acres are considered to have moderate potential for development. The values associated with the natural settings of the roadless area are protected by the Forest Plan.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. The recreational use, special uses, and mineral management could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 577 (in acres)

Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								146,657
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument	146,657	146,657	146,657	146,657	146,657	146,657	146,657	
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat								
Semi-remote Recreation								
Recommended LUD II								
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber production								
TOTAL	146,657	146,657	146,657	146,657	146,657	146,657	146,657	146,657
Suitable Timber Lands	0	0	0	0	0	0	0	0

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