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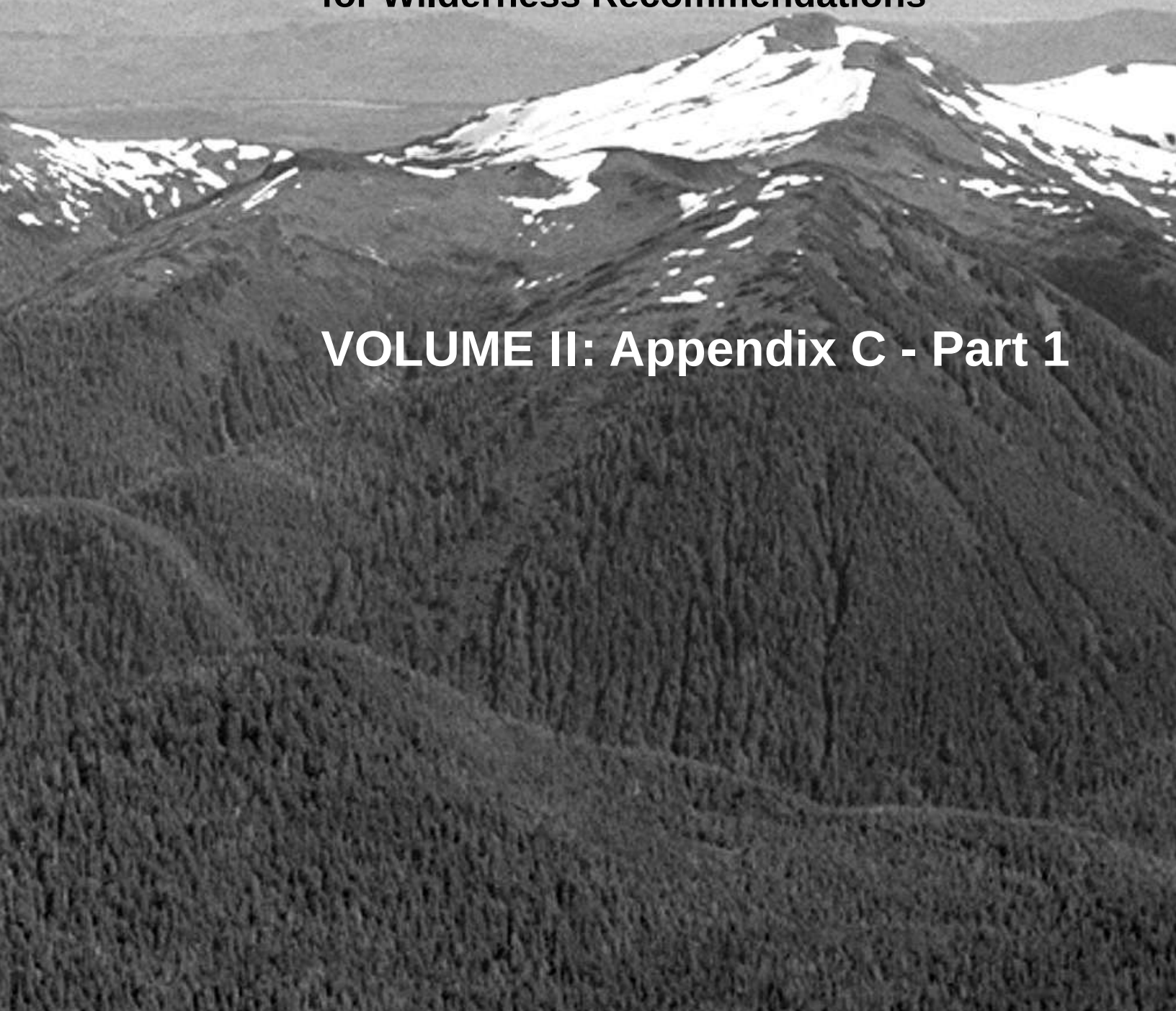
# Tongass Land Management Plan Revision

# Final Supplemental Environmental Impact Statement

## Roadless Area Evaluation for Wilderness Recommendations



## VOLUME II: Appendix C - Part 1

*Tongass National Forest*
*Land Management Plan Revision*

# Final
# Supplemental Environmental Impact Statement

## Roadless Area Evaluation for Wilderness Recommendations

## *Volume II: Appendix C–Part 1*
## *Roadless Area Evaluation*

United States Department of Agriculture
Forest Service–Alaska Region

**February 2003**

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## 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 |
| EA | Environmental Assessment |
| 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 |
| MBF | thousand board feet |
| MMBF | million board feet |
| NCC | Narrows Conservation Coalition |
| NEPA | National Environmental Policy Act |
| NFMA | National Forest Management Act |
| NFS | National Forest System |
| NSRAA | Northern Southeast Regional Aquaculture Association |
| NVUM | National Visitor Use Monitoring |
| 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 |

**ACRONYMS AND ABBREVIATIONS (Continued)**

| | |
|---|---|
| ROD | Record of Decision |
| ROS | Recreation Opportunity Spectrum |
| ROW | right of way |
| RVD | recreation visitor day |
| 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 |
| TRUCS | Tongass Resource Use Cooperative Survey |
| TTRA | Tongass Timber Reform Act |
| TUS | Transportation and Utility System |
| U | Urban |
| USGS | U.S. Geological Survey |
| VCU | Value Comparison Unit |
| VHF | very high frequency |
| WAA | Wildlife Analysis Area |
| WARS | Wilderness Attribute Rating System |
| WRC | Wrangell Resource Council |

# Appendix C
# Roadless Area Evaluation

## Introduction

This appendix presents the detailed roadless area descriptions that document the individual evaluations of inventoried roadless areas on the Tongass National Forest. These evaluations were conducted to provide the basis for potential wilderness recommendations. This appendix was developed to support the assessment presented in the Supplemental Environmental Impact Statement (SEIS) to the 1997 Tongass Land Management Plan Revision Final EIS (referred to in the document as the 1997 Tongass Forest Plan Revision Final EIS). In addition, it represents an update and expansion of the Analysis of the Management Situation (AMS) requirements pertinent to roadless areas for Forest Planning. As a result, this appendix provides an update to the AMS that was prepared in 1989 for the 1997 Tongass Forest Plan Revision Final EIS.

The remainder of this introduction to Appendix C consists of three main parts. The first part presents a description of the roadless area inventory process and also compares the Tongass roadless inventory with the inventory defined under the Roadless Area Conservation Rule. The second part describes the three general criteria that a wilderness evaluation should consider —capability, availability, and need— and defines them more specifically in the context of the evaluation process employed for this SEIS; it also presents general aspects of the evaluation that apply to all the individual roadless area evaluations. The third part describes the content of the individual roadless area description sections including a detailed overview of the factors discussed in each section, along with relevant supporting information.

Following the introductory sections, the individual roadless area descriptions are presented in numerical order. The appendix is presented in two volumes: Volume II of the SEIS, which is Part 1 of Appendix C, includes the individual roadless area descriptions for Roadless Areas 201 through 310 and Volume III of the SEIS, which is Part 2 of Appendix C, includes the descriptions for Roadless Areas 311 through 577.

## Roadless Area Inventory

### Inventory Process

According to the Forest Service Handbook (FSH 1909.12, Chapter 7, Section 7.1), the first step in the evaluation of potential wilderness is to identify and inventory all roadless, undeveloped areas that satisfy the definition of wilderness. The minimum criteria for considering a roadless area in the evaluation of wilderness potential was established by the Wilderness Act of 1964 and in subsequent regulation and policies. In addition to these criteria, the Forest Service Handbook requires that an area contain at least 5,000 acres of undeveloped land that does not contain improved roads maintained for travel by passenger-type vehicles. Areas less than 5,000 acres may, however, qualify if they are a self-contained ecosystem, such as an island; are contiguous to existing wilderness; or are ecologically isolated by topography and manageable in a natural condition.

A total of 106 inventoried roadless areas were identified and examined for potential wilderness recommendations early in the Tongass Forest Plan Revision process that resulted in the 1997 Tongass National Forest Land and Resource Management Plan (referred to in this document as the 1997 Tongass Forest Plan). The results of this analysis were recorded in Appendix C of the 1989 AMS. An update of this analysis was produced and included as Appendix C to the 1997 Tongass Forest Plan Revision Final EIS. This update addressed 110 roadless areas, the total number having increased primarily due to the splitting of some roadless areas by development.

The first step in this assessment process was to update the Tongass roadless area inventory. This involved identifying all the developed areas on the Tongass through a comprehensive update of the inventory of existing roads, timber harvest units, and land ownership on the Forest. Existing roads and harvest units, and all areas within 1,200 feet of an existing road and 600 feet of an existing harvest unit, were considered developed for the purposes of

this analysis. These 1,200- and 600-foot buffers were necessary because areas near roads, harvest units, and other developments would be influenced by that development. The buffering process allows for more consistent mapping for analysis purposes, without restricting where the actual boundary could be designated by Congress. Narrow strips of land between developed areas were included as part of the adjacent developed areas. In general accordance with the Forest Service Handbook criteria for including improvements, and in order to be more inclusive, isolated beach-logged and helicopter units were not considered developed. This represented a change from the approach taken in the earlier mapping. The beach-logged areas were mostly harvested several decades ago and have regrown to the extent that they are natural appearing to most visitors. The helicopter-logged units are usually partially harvested and mostly natural appearing after the harvest is completed. The degree of modification and appearance of these harvest inclusions are factored into the evaluation of affected roadless areas.

All National Forest System lands outside of the areas defined as developed were identified as roadless. These roadless areas were then divided into those areas greater than 5,000 acres and those less than 5,000 acres. The roadless areas evaluated for this SEIS included all roadless areas greater than 5,000 acres. In addition, all other areas less than 5,000 acres in size were examined to determine if they were eligible for wilderness consideration. These included small unroaded areas adjacent to existing wilderness.

As a result of this process, 115 roadless areas were evaluated for the Draft SEIS. This increase in number from the 106 inventoried areas addressed in Appendix C of the 1989 AMS reflects the splitting of some roadless areas due to development since 1989, as well as the inclusion of some small individual roadless areas that were previously considered developed and/or marginally eligible for wilderness recommendation. These areas were included in the roadless area analysis for the Draft SEIS primarily because of the high public interest in management of roadless areas on the Tongass.

## Updates and Adjustments to the Inventory between the Draft and Final SEIS

After conclusion of the public comment period for the Draft SEIS, each roadless area was reviewed and the boundaries were updated to reflect changes in land ownership and ongoing project implementation activities that changed the roadless character of the area. The project implementation activities generally included new road construction, timber sale harvesting, and new powerline clearing. In addition, each roadless area boundary was evaluated relative to its manageability, especially where these boundaries were adjacent to developed areas. The boundaries were adjusted to smooth them out by excluding narrow strips of land between developed areas and by excluding smaller areas that were effectively pinched off by developed areas. Feedback on manageability of each roadless areas was received from staff at each of the ranger districts and was considered during the update and adjustment process.

These updates and adjustments resulted in changes to many of the base Geographic Information System (GIS) coverages such as ownership, harvest areas, roads, and LUDs, in addition to the roadless area inventory. As a result, extensive revisions to the quantification presented for each roadless area were necessary and these are reflected in this final version of Appendix C.

In addition, smaller roadless areas that are heavily influenced by developments on adjacent lands and that were included on the list of inventoried roadless areas for the Draft SEIS, were evaluated to see if they should be carried forward as inventoried roadless areas or categorized simply as unroaded areas in the Final SEIS. This effort resulted in six Draft SEIS roadless areas being dropped from the inventory. All of these unroaded areas were included in Alternative 8 as Recommended Wilderness and most were included in Alternative 6 as Recommended LUD II. These areas have been left in Alternatives 6 and/or 8 for the Final SEIS. The following paragraphs provide a summary of the reasons why, after further evaluation, these six Draft SEIS roadless areas are no longer included in the list of inventoried roadless areas, and are now categorized as unroaded areas:

**219 North Mitkof:** This unroaded area is made up of two parcels of about 5,060 and 4,860 acres located in the immediate vicinity of Petersburg. The boundaries of each area are made up of a combination of non-National Forest System lands and areas defined by roads and timber harvest. Nearly all of the area within the two parcels is less than 1 mile from a road. Activities on non-National Forest System lands are not buffered and, thus, influence the unroaded areas as well. The area received a Wilderness Attribute Rating System (WARS) rating of 14 out of a possible 28 points, and rates in the lower 7 percent of WARS ratings on the Tongass. The North Mitkof area was not part of the 1996 Roadless Inventory included in the 1997 Forest Plan, as it was considered to be part of the

developed area. Draft SEIS public comments received on North Mitkof were limited and were either against designation or favored recommending all remaining roadless areas on Mitkof Island for LUD II. The North Mitkof area is included in the Final SEIS Alternative 6 as Recommended LUD II, and in Alternative 8 as Recommended Wilderness. Overall, the North Mitkof area is not suitable or manageable for wilderness, nor as an inventoried roadless area. This is primarily because of the relatively small size of the two parcels in a landscape that is highly fragmented by developments and its very irregular shape with a high degree of edge along developed areas. It is also an area of relatively low public interest.

**222 Central Mitkof:** This unroaded area is about 6,090 acres in size and located in the vicinity of Petersburg and along the Mitkof Highway. The highway and Forest Roads, along with associated developments, form the boundaries of this relatively small, irregular unroaded area. The area received a WARS rating of 14 out of a possible 28 points, and rates in the lower 7 percent of WARS ratings on the Tongass. The Central Mitkof area was not included in the 1996 Roadless Inventory used in the 1997 Forest Plan as it was considered to be part of the developed area. Draft SEIS public comments received on Central Mitkof were limited and were either against designation or favored recommending all remaining roadless areas on Mitkof Island for LUD II. The Central Mitkof area is included in the Final SEIS Alternative 6 as Recommended LUD II, and in Alternative 8 as Recommended Wilderness. Overall, the Central Mitkof area is not suitable or manageable for wilderness, nor as an inventoried roadless area. This is primarily because of its relatively small size and the irregular shape of the area in a landscape that is highly fragmented by developments. It is also an area of relatively low public interest.

**288 West Wrangell:** This unroaded area is about 3,600 acres and located near Wrangell. Roads and associated developments form the boundaries of this small unroaded area. The area received a WARS rating of 15 out of a possible 28 points, and rates in the lower 11 percent of WARS ratings on the Tongass. The West Wrangell area was about 10,300 acres in the 1996 Roadless Inventory used in the 1997 Forest Plan, but has been fragmented and reduced in size by ongoing developments and changes in land ownership. Draft SEIS public comments received on West Wrangell were limited and were either against designation or favored recommending all remaining roadless areas on Wrangell Island for LUD II. The West Wrangell area is included in the Final SEIS Alternative 8 as Recommended Wilderness. Overall, the West Wrangell area is not suitable, nor manageable for wilderness or as an inventoried roadless area. This is primarily because of the small size and irregular shape of the area in a landscape that is highly fragmented by developments. It is also an area of relatively low public interest.

**309 Juneau Islands:** This unroaded area is about 2,260 acres and is comprised of portions of several small islands near Juneau. The ownership of the islands is a mixture of State, private and National Forest System lands. Developments, primarily on non-National Forest System lands, include recreation cabins, permanent residents, a commercial lodge, and related facilities. The area received a WARS rating of 14 out of a possible 28 points, and rates in the lower 7 percent of WARS ratings on the Tongass. The Juneau Islands area was not included in the 1996 Roadless Inventory used in the 1997 Forest Plan. Few Draft SEIS public comments were received relative to Juneau Islands and these were in favor of a LUD II recommendation. The Juneau Islands area is included in the Final SEIS Alternative 6 as Recommended LUD II, and in Alternative 8 as Recommended Wilderness. Overall, the Juneau Islands area is not suitable or manageable as wilderness, nor as an inventoried roadless area. This is primarily because of the small size of the area and that most of the acreage is made up of parts of small islands with nearby developments on adjacent non-National Forest System lands. It is also an area of relatively low public interest.

**513 Sweetwater:** This unroaded area is about 6,710 acres and located near Coffman Cove. Roads and associated developments define the boundaries of this linear and irregularly shaped unroaded area. All areas within the unroaded area are less than 1 mile from a road. The area received a WARS rating of 14 out of a possible 28 points, and rates in the lower 7 percent of WARS ratings on the Tongass. The Sweetwater area was not included in the 1996 Roadless Inventory used in the 1997 Forest Plan as it was considered to be part of the developed area. Few Draft SEIS public comments were received relative to the Sweetwater area and these were in favor of a LUD II recommendation. The Sweetwater area is included in the Final SEIS in Alternative 8 as Recommended Wilderness. Overall, the Sweetwater area is not suitable or manageable as wilderness, nor as an inventoried roadless area. This is primarily because of its relatively small size and irregular shape in a landscape that is highly fragmented by developments. It is also an area of relatively low public interest.

**536 Kasaan Bay:** This unroaded area is about 4,690 acres and located near Skowl Arm on Prince of Wales Island. The area is located in a National Forest System parcel surrounded by State and private lands, much of which has been intensively developed for timber management. Timber management developments also define the boundaries

of the unroaded area within the National Forest System lands. The area received a WARS rating of 13 out of a possible 28 points, and rates in the lower 1 percent of WARS ratings on the Tongass. The Kasaan Bay area was included in the 1996 Roadless Inventory used in the 1997 Forest Plan with a size of about 7,250 acres. Ongoing timber sale development has reduced the size to the current 4,690 acres. Few Draft SEIS public comments were received relative to Kasaan Bay and these were in favor of a LUD II recommendation. The Kasaan Bay area is included in the Final SEIS Alternative 6 as Recommended LUD II, and in Alternative 8 as Recommended Wilderness. Overall, the Kasaan Bay area is not suitable or manageable as wilderness, nor as an inventoried roadless area. This is primarily because of the small size of the area, its irregular shape, and its proximity to ongoing intensive management on adjacent non-National Forest System lands. It is also an area of relatively low public interest.

## Current Maps and Descriptions of Roadless Areas

The inventoried roadless areas are mapped, along with other unroaded areas, on a large Forest-scale map in the separate Map Packet, as well as in the Map Section of the SEIS CD-ROM (CD). They are also mapped individually at a larger scale in the Map Section of the SEIS CD. These maps are also available on the SEIS Web site at www.tongass-seis.net.

The updated, detailed descriptions of each individual roadless area presented in this appendix reflect current conditions and Forest Service Manual and Handbook direction. Each roadless area description documents the results of the evaluation process used in this analysis. Each inventoried roadless area was evaluated with respect to the key characteristics of capability, availability, and need (FSH 1909.12, Chapter 7 – Wilderness Evaluation). These updated roadless area descriptions each consist of five sections: Overview and Description, Wilderness Capability, Availability for Wilderness, Wilderness Evaluation (Need for Wilderness), and Environmental Consequences (FSH 1909.12, Chapter 4 – Forest Planning Documents). All acres identified in these descriptions are estimates developed from the detailed Forest-wide Geographic Information Systems (GIS) database that was revised and updated for this analysis.

## The Roadless Area Conservation Rule and the Tongass Roadless Inventory

In May 2001, the Forest Service issued the Roadless Area Conservation Rule. This rule established prohibitions on road construction, road reconstruction, and timber harvest in inventoried roadless areas on National Forest System lands. In May 2001, the U.S. District Court for the District of Idaho enjoined the Forest Service from implementing the Roadless Rule, a decision that was subsequently appealed. In December 2002, a three-justice panel of the Ninth Circuit Court of Appeals reversed the Idaho ruling. The case was returned to the State of Idaho for evaluation of the merits, who then requested review by the full Ninth Circuit. Several other states, including the State of Alaska, filed lawsuits similar to the State of Idaho. These lawsuits are still pending. Meanwhile, the Forest Service initiated a review of the Roadless Rule and is evaluating public comment taken on an Advanced Notice of Proposed Rulemaking for roadless conservation. This effort has been undertaken to consider making adjustments to the Roadless Rule.

The inventoried roadless areas to which these prohibitions apply are identified in a set of maps, contained in the Forest Service Roadless Area Conservation, Final Environmental Impact Statement, Volume 2, dated November 2000. For the Tongass these maps represent 9.3 million acres and correspond closely with the 1996 roadless area inventory that was done for the 1997 Forest Plan Revision. The Roadless Areas section of the Final SEIS compares the areas protected by the Roadless Rule with the areas included in the current Tongass roadless area inventory, which covers 9.6 million acres. The differences are due to additional road-building between 1996 and 2003, refinements of boundaries in 2003, and projects that were expected to be built in 1996 that were never implemented. Approximately 9.1 million of the 9.6 million acres in the Final SEIS inventoried roadless areas, are also included under the Roadless Rule.

# Roadless Area Evaluation – Criteria and General Aspects

The Forest Service Handbook (FSH 1909.12, Chapter 7, Section 7.2) requires that the potential wilderness designation of an inventoried roadless area be carefully evaluated to determine the mix of land and resource uses that best meet public needs. Areas recommended as suitable for wilderness are required to meet the tests of capability, availability, and need. These broad criteria are more specifically defined in the Forest Service Handbook. In addition to displaying an inherent wilderness quality, each area must provide opportunities that are dependent upon or enhanced by a wilderness environment. The Forest Service's ability to manage the area as wilderness is also considered as part of the evaluation process.

The following sections provide an overview of the three general criteria that a wilderness evaluation should consider—capability, availability, and need— and defines them more specifically in the context of the evaluation process employed for this SEIS. In addition, it presents general aspects of the evaluation that apply to all the individual roadless area evaluations.

## Capability

Wilderness capability addresses the degree to which an area contains the basic characteristics that make it suitable for wilderness designation without considering its availability or whether it meets a need for wilderness (FSH 1909.12, Section 7.21). The Forest Service Handbook notes that there are an infinite number of possible combinations of basic natural characteristics and the significance of these combinations for wilderness designation will vary from region to region. The handbook identifies several principal wilderness characteristics that should be considered in an analysis of the potential wilderness value of an inventoried roadless area. These characteristics include the natural and human environment, challenge, outdoor recreation opportunities, special features, and manageability.

The analysis prepared for this SEIS evaluates the capability of each inventoried roadless area for wilderness in terms of these key wilderness characteristics. Each inventoried roadless area description considers the key wilderness attributes of natural integrity, apparent naturalness, opportunities for solitude, and primitive recreation opportunities. Each description also identifies and describes any unique scenic, ecological, geological, cultural, or scientific or educational opportunities or resources that could be lost if the area were not designated wilderness. The Forest Service's ability to manage the area as wilderness in accordance with the Wilderness Act is also addressed in each roadless area description.

Wilderness Attribute Rating System: One of the primary measures used in this evaluation to measure the quality of inventoried roadless areas is the Wilderness Attribute Rating System (WARS). WARS was developed by the Forest Service in conjunction with public interest groups in 1977 and was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation (RARE II) process. WARS was applied to the Tongass National Forest for the first time in 1979 as part of the RARE II process and was also used to rate the inventoried roadless areas in the 1989 AMS. The analysis of inventoried roadless areas conducted for this SEIS also employed this system and the results of the WARS evaluation were used in the development of some wilderness alternatives.

WARS established a procedure for identifying and rating an area's wilderness quality based on the key attributes of wilderness as defined in the Wilderness Act. This system evaluates the main attributes identified in the Wilderness Act: natural integrity, apparent naturalness, opportunity for solitude, and primitive recreation opportunities. Each of these four attributes is rated on a scale of 1 to 7, ranging from the virtual absence (1 out of 7) to the outstanding presence of the attribute (7 out of 7). A total composite wilderness score is calculated by adding the four scores together to produce a total score out of a maximum possible 28 points. This system was used to rate the wilderness quality of each of the inventoried roadless areas evaluated as part of this SEIS. The areas were rated and ranked in two ways. The areas were first rated and ranked based on the boundary established in the roadless inventory update process. Composite scores ranged from 13 to 28 (out of 28), with a median score of 20. The second approach, in accordance with Forest Service Handbook direction and the WARS process, involved adjusting the boundary of some of the inventoried roadless areas to exclude negative intrusions on the area's potential wilderness quality. The areas with an adjusted boundary were rated again, with the composite scores for these areas generally increasing by

one or two points. The range of scores remained the same, but the median increased to 21. Additionally, several of the larger or more complex roadless areas were subdivided and each portion was rated separately.

The WARS process also includes two supplementary area ratings: a supplementary wilderness attribute rating, which addresses the ecological, geological, scenic, and cultural attributes of the area; and a separate scenic value rating. The WARS evaluation conducted as part of this SEIS analysis also rated each inventoried roadless area for these supplementary attributes. These scores are recorded in the data sheets used for the analysis but are not incorporated in the total composite score for each area. This approach is consistent with the analysis conducted for the 1989 AMS.

As noted in the RARE II Final EIS (USDA Forest Service, 1979), WARS is most accurate and appropriately applied within each Forest Service Region and is not meant to compare the wilderness attributes of areas located in different regions of the country. The WARS evaluation conducted as part of this project is specific to Southeast Alaska.

### Availability

While all National Forest System lands that meet wilderness capability requirements are generally available for consideration as wilderness, three issues need to be evaluated to formally determine availability. First, the value of and need for the potential wilderness resource is compared to the value and need for other resources. In order to be considered available for wilderness, the tangible and intangible values of the potential wilderness resource should offset the value of the resources that would be forgone if the area were designated wilderness. The values of potentially forgone resource demands and uses are not only or necessarily measured in terms of dollar returns or unit output. Rather, the analysis of value should be based on both quantitative and qualitative information. A second and related issue that is addressed in the evaluation of wilderness availability is the effect that wilderness designation and management is likely to have on adjacent lands.

The third issue addressed in an evaluation of availability is the presence of any constraints or encumbrances on lands within or adjacent to the roadless area that may affect management of the area as wilderness. The Forest Service needs to have sufficient control of the lands that are recommended for wilderness to ensure that incompatible uses that would lessen the wilderness character and potential of the area are not developed in the future. The availability analysis prepared for this SEIS identifies existing and potential land use authorizations, as well as the current ownership and encumbrances within and adjacent to each inventoried roadless area.

The inventoried roadless area analysis prepared for this SEIS discusses the value and potential uses of other resources that could be affected by wilderness designation. This discussion includes recreation and tourism, subsistence, fish, wildlife, timber, minerals, transportation and utilities, water availability and use, and areas of scientific interest. The analysis also addresses the effects that wilderness designation would have on adjacent areas, with respect to these same resources. These resources, which are addressed in the *Availability* section of each roadless area description, are very similar to those discussed in the *Capability* section. The key difference is, however, that the *Capability* section evaluates these resources as potential wilderness characteristics with an emphasis on their value in a wilderness setting and what could be lost if the area were not designated wilderness. The *Availability* analysis, in contrast, evaluates the potential negative effects that wilderness designation could have in terms of opportunities that would be forgone if the area were designated as wilderness.

### Need

The wilderness evaluation prepared for the SEIS determines the need for an area to be designated as wilderness based on the degree to which it contributes to the local and national distribution of wilderness (FSH 1909.12, Section 7.23). The Forest Service Handbook requires that this evaluation identify clear evidence of current or future public need for additional designated wilderness in the general area under consideration. This need should be demonstrated through the public involvement process, including public input to the environmental analysis. Need should also be evaluated on a national basis and this evaluation should include a number of factors, such as the geographic distribution of areas, representations of landforms and ecosystems, and the presence of wildlife expected to be visible in a wilderness environment. The Forest Service Handbook identifies a number of assumptions and factors that should be considered in determining whether there is a need to designate a roadless area as wilderness (FSH 1909.12, Sections 7.23a and 7.23b). These factors are discussed in the following paragraphs.

**National and State Distribution of Wilderness:** The National Wilderness Preservation System (NWPS) includes almost 105 million acres. More than half of this acreage is in Alaska. In addition to having the highest land area in wilderness, Alaska also has the highest percentage of its land area in wilderness among the 50 states. The states with both the highest land area and highest percent land area in wilderness are Alaska, California, Washington, Idaho, and Arizona (Landres and Meyer, 2000).

In addition to having the greatest amount of land and the highest percentage of its land base in wilderness, Alaska also has the highest number of wilderness acres per resident, with almost 90 acres per resident. When only Southeast Alaska is considered, the number of acres per resident increases to slightly more than 120. These compare with the next closest state of Wyoming with about 6 acres per resident. These figures are relevant only as one measure of the need for more wilderness from a local resident perspective.

There are currently a total of 5.8 million acres in 19 wildernesses on the Tongass National Forest. This represents approximately 34 percent of the Tongass and 28 percent of the land in Southeast Alaska. Viewed on a national basis, existing wilderness on the Tongass represents 17 percent of all wilderness on National Forest System lands and 5.5 percent of all lands in the National Wilderness Preservation System (USDA Forest Service, 2000).
Two of the largest wildernesses on the Tongass, Kootznoowoo (Admiralty Island) Wilderness (almost 1 million acres) and Misty Fiords National Monument Wilderness (2.1 million acres), contain vast, virtually intact ecosystems. Five other wildernesses are each over 0.25 million acres in size. The wildernesses of the Tongass are mostly in a pristine condition, with the imprint of humans generally not noticeable. They offer outstanding opportunities for solitude and primitive recreation.

**Relative Local Contribution:** This factor includes the location, size, and type of other wildernesses in the general vicinity of the area being evaluated. This factor is addressed in each roadless area description prepared for the SEIS; the distance between the roadless area and the closest wildernesses are identified, as well as the distance between the roadless area and the closest populated areas, including the larger communities in the region, as appropriate.

**Preservation of Landforms and Ecosystems:** One of the major factors to be considered is the "area's ability to provide for preservation of identifiable landform types and ecosystems" (FSH 1909.12, Section 7.23b.6). This factor is addressed in this analysis by reviewing the biogeographic province(s) and the ecological section(s) and subsection(s) that contains each inventoried roadless area. The subdivision of the Tongass National Forest into biogeographic provinces (21 occur on the Tongass) characterized by similar species composition; similar patterns in distribution for many species; similar geologic barriers and historic events, such as glaciation; and similar climatic conditions. At the ecological subsection level, delineation factors include surficial geology, lithology, geomorphic process, soil groups, subregional climate, and potential natural communities (climax vegetation). Fourteen ecological sections and 73 ecological subsections occur on the Tongass. The biogeographic provinces and ecological sections/subsections are discussed in the *Biodiversity* section of Chapter 3 of the SEIS. Each roadless area description identifies whether there are other existing wildernesses within the appropriate biogeographic province or ecological section/subsection and evaluates whether the roadless area contains any unique landforms or ecosystems that are not already represented in wildernesses located within this province.

In order to put this evaluation in perspective, it is necessary to consider a framework that identifies the "big picture" aspects associated with the preservation of landforms and ecosystems. This framework is addressed in the following paragraphs.

As noted above, there are currently 5.8 million acres in 19 wildernesses on the Tongass National Forest. This represents approximately 35 percent of the Tongass and 28 percent of the land in Southeast Alaska. These 19 areas are identified and discussed in the *Wilderness* section of Chapter 3 of the SEIS. Viewed on a national basis, existing wilderness on the Tongass represents 17 percent of all wilderness on National Forest System lands and 5.5 percent of the entire National Wilderness System (USDA Forest Service, 2001).

DeVelice and Martin (2001) provide a national summary of acreage in National Forest roadless areas versus designated wilderness, National Parks, and other areas primarily managed to maintain natural values (i.e., conservation reserves). In Alaska, all but 1 of 15 ecoregions (as defined by Ricketts et al., 1999) has greater than 12 percent of its area in reserves. No other region in the country surpasses Alaska in ecological representation in reserves.

Two ecoregions cover the Tongass National Forest: the Northern Pacific Coastal Forest and the Pacific Coastal Mountain Tundra and Ice fields (Ricketts et al., 1999). These two ecoregions extend from eastern Kodiak Island to the southern end of the Alaska panhandle. Approximately 19 percent of the Northern Pacific Coastal Forest and 37 percent of the Pacific Coastal Mountain Tundra and Ice Fields ecoregion are in reserves (DeVelice and Martin, 2001). The portions of both of these areas protected in wilderness are well above the 12 percent threshold considered by some authorities (e.g., World Commission on Environment and Development, 1987) as the minimum area for representation (see DeVelice and Martin, 2001).

When the acreage of inventoried roadless areas is added to the acreage of conservation reserves in the two ecoregions, the percentage increases to 64 percent for the Northern Pacific Coastal Forest and to 66 percent for the Pacific Coastal Mountain Tundra and Ice Fields ecoregions (DeVelice and Martin, 2001). These values are in the 25 to 75 percent range that Noss and Cooperrider (1994) argue is required to achieve representation, but are substantially higher than the 12 percent threshold.

When one considers only National Forest System lands, the percentage of National Forest System land area in wilderness in these ecoregions is 25 percent for the Northern Pacific Coastal Forest and 21 percent for the Pacific Coastal Mountain Tundra and Ice Fields. It should be noted that there is no designated wilderness on the Chugach National Forest, so all references to designated wilderness on National Forest System lands in Alaska pertain to the Tongass. If all inventoried roadless areas are counted along with wilderness, then the total area of wilderness plus inventoried roadless areas on National Forest System lands in these ecoregions increases to 69 percent and 79 percent, respectively (DeVelice and Martin, 2001).

Viewed in terms of broad National Forest land cover classes, designated wilderness on National Forest System lands in Alaska exceeds 12 percent of the area in five land cover classes that are prevalent in Southeast Alaska. These five classes are Evergreen Forest (23 percent), Tundra (15 percent), Barren Land (37 percent), Water (23 percent), and Glaciers-Snow (15 percent). Designated Wilderness does not exceed 12 percent of the area for Deciduous Forest (0 percent), Mixed Forest (0 percent), and Shrub-Brush (9 percent) (Martin et al., 2000). These latter three land cover types are, however, not prevalent in Southeast Alaska.

**Preservation of Biotic Species:** The evaluation of need also considers the "ability of certain biotic species to compete with increasing public use and developmental projects that affect their habitats" and considers whether means other than wilderness designation can meet the needs of these species (FSH 1909.12, Section 7.23b.4). In addition, the evaluation is to consider "the need to provide a sanctuary for those biotic species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific values or phenomena" (FSH 1909.12, Section 7.23b.5).

Productive old-growth forest (conifer stands greater than 250 years in age with a volume of 8,000 board feet per acre or higher) provides essentially all the highly important habitats and the majority of the moderately important habitats for the Tongass management indicator species and other species of concern (see the *Biodiversity*; *Threatened, Endangered, and Sensitive Species;* and *Wildlife* sections of Chapter 3 in the SEIS). The current old-growth forest conservation strategy is based on the assumption that if a functional interconnected old-growth ecosystem is maintained then its component parts (composition and structure) and processes (function) are also maintained. There are currently approximately 5 million acres of productive old growth on the Tongass. The current Forest Plan provides for the protection of 90 percent of the productive old growth in wilderness or natural setting LUDs and through the implementation of Forest-wide standards and guidelines. In addition, approximately 78 percent of the Tongass land base is allocated to wilderness or natural setting LUDs, where road construction is not allowed or is severely restricted, and where the area could generally be described as "primitive." It is believed that the old-growth conservation strategy, together with species-specific standards and guidelines, are sufficient to provide an amount and distribution of habitat adequate to maintain viable populations of vertebrate species, as well as the diversity of plant and animal communities (USDA Forest Service, 1997).

**Recreation Use and Demand:** Other factors that the Forest Service Handbook identifies for evaluation are the present visitor pressure on other wildernesses and projected visitor trends, as well as the extent to which non-wilderness lands are likely to provide opportunities for unconfined recreation experiences (FSH 1909.12, Sections 7.23b.2 and 3). Precise estimates of current recreation and tourism on the Tongass are not available. The Forest Service is participating in the collection of Forest-wide visitor use data as part of the National Visitor Use Monitoring (NVUM) program. Forest-wide visitor use was last estimated for the Forest as a whole in 1996. This

information is summarized in the *Economic and Social Environment* section of Chapter 3 of the SEIS. These data suggest that demand for unconfined recreation experiences on the Tongass is presently met. Unconfined or primitive recreation experiences are also presently met on non-wilderness lands on the Tongass in Natural Setting LUDs, as well as on the adjacent Glacier Bay National Park. In addition to the 5.8 million acres of existing designated wilderness on the Tongass, another 7.2 million acres are allocated to Natural Setting LUDs (see Table C-1).

**Relative Contribution to the National Wilderness Preservation System:** The individual roadless area descriptions that make up the bulk of this appendix, provide an assessment of the relative contribution of each roadless area to the National Wilderness Preservation System. This section summarizes some of the roadless area-specific issues that are important for consideration regarding the need for each area. These assessments conclude with a ranking of this relative contribution in relation to the 109 roadless areas being evaluated. Each roadless area was assigned one of the following rankings relative to each other: very low, low, moderate, high, or very high. This ranking was developed first based on the WARS rating for each area. Then the ranking was modified up or down based on other major factors. The other major factors considered were: the amount of public interest in designation of the roadless area; the supplemental WARS values (including ecological, geological, cultural, and scenic); the location of the area with regard to nearby wildernesses and other natural areas; the size of the area and the potential for creating large wildernesses; the amounts of both high volume and high structure old growth in the area; and the presence and current representation in wilderness of identifiable ecosystems and landforms (as represented by biogeographic provinces, ecological sections, ecological subsections, and unique landforms – see above).

**Demonstrating Public Interest:** Public and Congressional interest is demonstrated in each roadless area description through a compilation of information from public involvement efforts spanning more than a decade, extending back to 1989. These sources of information include a summary of a recent Congressional proposal (the Alaska Rainforest Protection Bill) and the House version of what became the Tongass Timber Reform Act of 1990, comments on various drafts and the Final EIS for the Tongass Land and Resource Management Plan Revision, appeals filed on the 1997 Tongass Forest Plan Final EIS, comments on individual timber sale and other management projects proposed for portions of, or adjacent to, inventoried roadless areas on the Tongass, and comments received on the Draft SEIS (including those given at public hearings). This information taken together provides an extensive overview of the public opinion related to all or portions of the roadless areas being reviewed.

# Content of Individual Roadless Area Description Sections

This section provides a detailed description of the individual roadless area descriptions that make up the majority of Appendix C. Prior to presenting this detailed description, a section discussing the quantification that is incorporated into the descriptions is presented.

## Quantification in the Descriptions

The individual roadless area descriptions include extensive quantification of the acreage and mileage of various features within each roadless area. These measurements are estimates developed from the detailed Forest-wide Geographic Information Systems (GIS) database that was revised and updated for this analysis. In the vast majority of cases, this database represents the best available information; however, the quality of the GIS coverages varies.

It should be noted that in some cases (e.g., the ROS, EVC, and Variety Class coverages) the entirety of each roadless area is not always inventoried and, therefore, the sum of the acres of individual categories is often less than the total roadless area acreage. Also, in cases where the acres depend on an overlay of multiple coverages, the acreage measurements for individual categories sometimes needs to be adjusted to account for the fact that coverages do not always line up exactly in places where they should (e.g., along property boundaries, saltwater shorelines, lake edges). Very slight misalignment of these coverages can result in polygon slivers between the coverages, which can produce acreage differences initially. These differences can amount to tens of acres or more, especially since we are dealing with such a large area (i.e., 17 million acres of National Forest System land, in addition to millions of acres of adjacent salt water and private and state lands). However, on a percentage basis, these slivers and the adjustments that are necessary are insignificant.

It should also be noted that the figures presented are generally rounded to the nearest whole acre, whole mile, or whole percent. No attempt has been made to adjust the numbers to force the sums of rounded numbers to equal the expected totals. Therefore, the sum of rounded individual numbers will often be one digit higher or lower than the expected sum. The sums that are presented are the sums of the unrounded numbers.

As noted previously, many updates and adjustments were made to the roadless area inventory and base GIS coverages between the Draft and the Final SEIS. As a result, extensive revisions to the quantification presented for each roadless area were necessary and these are reflected in this final version of Appendix C.

## Outline and Description of Individual Roadless Area Descriptions

As previously noted, each roadless area description consists of five sections: Overview and Description, Wilderness Capability, Availability for Wilderness, Wilderness Evaluation (Need for Wilderness), and Environmental Consequences (FSH 1909.12, Chapter 4 – Forest Planning Documents). The following sections describe each of the roadless area description sections. The numbering system and titles used in the following sections directly correspond with those used in each inventoried roadless area description.

### I. Overview and Description

**(1) Location and Access:** This section identifies where the area is located, lists the approximate distance to the nearest community, describes what is along the area's boundary, and identifies how the area is accessed.

**(2) History:** This section describes any known prehistoric and historic uses in the area and identifies past logging activity, prospecting and mining activity, historic cabins and homesteads, and recreation cabins.

**(3) Geography and Topography:** This section generally describes the geography and topography of the area, including elevation ranges, major streams, lakes, watersheds, and major mountains and glaciers. This section also identifies the acreage of alpine, rock, glaciers, lakes, and islands and the mileage of saltwater shoreline included in the roadless area. These acres were estimated from the Forest-wide GIS database that was updated for the SEIS analysis.

**(4) Ecosystem:** This section presents an overview of the ecosystems of the roadless area starting with the ecological classification of the area, a brief description of soils, and a description of the vegetation, fish, and wildlife resources.

> **(a) Classification:** This subsection is divided into two parts. First, it identifies and briefly describes the biogeographic province(s) that encompass the roadless area. The Tongass National Forest is subdivided into 21 biogeographic provinces, which are characterized by similar species composition; similar patterns in distribution for many species, similar geologic barriers and historical events, such as glaciation; and generally similar climatic conditions and physiographic characteristics. The characteristics of each biogeographic province are summarized in the *Biodiversity* section of Chapter 3 of the SEIS.
>
> The second part is titled "Ecological Section/Subsection" and it is based on the new system of classifying the ecosystems of the Tongass into Ecological Sections and Subsections under the National Hierarchical Ecological Framework (Nowacki et al., 2001). This section identifies the ecological section(s) and ecological subsection(s) that are present in each roadless area, along with a description of the major ones.
>
> **(b) Soils:** This subsection provides a general description of the soils in the area and identifies well-drained, poorly drained, and alpine soils, as appropriate.
>
> **(c) Vegetation:** This subsection provides a general description of the vegetation in the area and identifies the portion of the area that consists of forestland, as well as the acreage that is classified as productive old growth. The portion of the total productive old-growth acres that consists of high volume productive old growth, as well as that consisting of high-volume, coarse-canopy old growth (see definition below) is also identified. Estimated acres of second growth (isolated beach logged and helicopter units) and muskeg are also listed. These acres were estimated from the Forest-wide GIS database that was updated for the SEIS analysis.

***Productive Old Growth***
Old-growth forests are ecosystems distinguished by old and large trees and related structural attributes. Old-growth forests can be generally divided into productive and unproductive components, based on the ability of specific areas to grow trees at a certain rate. Productive old growth may be divided into three categories (high, medium, and low volume) based primarily on average timber volume. High, medium, and low volume productive old-growth forest areas have average timber volumes of 35 thousand board feet (MBF), 25 MBF, and 16 MBF per acre, respectively. High volume old growth is considered an indicator of higher habitat quality for those animals and plants that use old growth. Another measure of high habitat quality that is considered more reflective of high habitat structure is that of high-volume, coarse-canopy old growth (Caouette et al., 2000; Caouette and DeGayner, 2001). This latter term refers to areas with large trees, but a high diversity in stand structure (it is represented on the Tongass by the Volume Class 6 and 7 polygons from the old volume class mapping). Productive old-growth forest is discussed in more detail in the *Biodiversity* section of Chapter 3 of the SEIS.

**(d) Fish Resources:** This subsection identifies the major fish-producing streams and lakes and the major species present in the area. This information was updated from the roadless area descriptions prepared for the 1989 AMS using information from the 1998 and 2000 Anadromous Waters Catalogue databases provided by the Alaska Department of Fish and Game (ADF&G).

**(e) Wildlife Resources:** This subsection identifies the major species that occur in the area, including Sitka black-tailed deer, moose, mountain goats, black bear, brown bear, gray wolf, marten, and other wildlife, as appropriate.

**(5) Management Direction and Current Uses:** This section briefly describes the land use designations (LUDs) assigned to the area and identifies the acres assigned to each LUD (see descriptions below and Table C-1). These acres were estimated from the Forest-wide GIS database that was updated for the SEIS analysis.

The section also identifies any Research Natural Areas (RNAs), Experimental Forests, Special Interest Areas, and Wild and Scenic Rivers in the area. RNAs and Experimental Forests are briefly described in Section II (6). Special Interest Areas are briefly discussed in Section I (4). These LUDs are also discussed in the *Research Natural Areas*, *Experimental Forests*, and *Wild and Scenic Rivers* sections of Chapter 3 of the SEIS.

This section also provides a description of the current uses of the area, including recreation use and facilities (e.g., cabins and trails), timber sales and other management projects, and subsistence use.

***Land Use Designations***
The 1997 Forest Plan identified 19 different land use designations (LUDs) designed to represent a wide range of allocation choices for managing specific areas of the Forest. These LUDs may be grouped into development and non-development LUDs as shown in Table C-1. Brief descriptions of each LUD are presented below.

**Table C-1**
**Land Use Designation Groupings**

| LUD Group | Land Use Designation |
|---|---|
| **Non-Development LUDs** | |
| Wilderness | Wilderness |
| | Wilderness National Monument |
| | Non-Wilderness National Monument |
| Natural Setting | Research Natural Area |
| | Remote Recreation |
| | Special Interest Area |
| | Old-Growth Habitat |
| | Enacted Municipal Watershed |
| | LUD II |
| | Semi-Remote Recreation |
| | Wild River |
| | Scenic River |
| | Recreation River |
| **Development LUDs** | |
| Moderate Development | Experimental Forest |
| | Scenic Viewshed |
| | Modified Landscape |
| Intensive Development | Timber Production |
| | Minerals |

Note: The Minerals LUD is an overlay LUD. Areas allocated to this LUD are managed according to the underlying LUD until such time that mineral development is approved. The table does not include the Transportation and Utility Systems LUD, which is an overlay LUD corridor. Areas allocated to this LUD are managed according to the underlying LUD until transportation or utility systems are constructed.

- **Wilderness:** Manage for the protection and perpetuation of essentially natural biophysical and ecological conditions and provide outstanding opportunities for solitude, primitive recreation, and scientific and educational uses, consistent with Alaska National Interest Lands Conservation Act (ANILCA), the Wilderness Act, and Tongass Timber Reform Act (TTRA). Roads are normally not permitted and use of mechanical transport and motorized equipment is limited.

- **Wilderness National Monument:** Manage the Wilderness portions of Admiralty Island and Misty Fiords National Monuments to provide outstanding opportunities for solitude and primitive recreation and to protect objects of ecological, cultural, geological, historical, prehistorical, and scientific interest, consistent with ANILCA and the Wilderness Act. Roads are not normally permitted and use of mechanical transport and motorized equipment is limited.

- **Non-Wilderness National Monument:** Manage the non-wilderness portions of Admiralty Island and Misty Fiords National Monuments to facilitate development of significant mineral resources, and to ensure that mining activities are compatible, to the maximum extent feasible, with the purposes for which the Monument was established.

- **Research Natural Area:** Manage forest resources for research and education and/or to maintain natural diversity. Current natural conditions are maintained insofar as possible. No timber harvest is allowed.

- **Remote Recreation:** Provide recreation opportunities and experiences outside Wilderness in unmodified natural environments where interaction with other visitors is infrequent, and the opportunity for independence and self-reliance is high. Timber harvesting is limited to insect and disease control. Roads are generally absent.

♦ **Special Interest Area:** Provide for the inventory, maintenance, protection, and interpretation of areas with unique archeological, historical, recreational, scenic, geological, botanical, zoological, or paleontological features. No timber harvest is scheduled. Roads are normally not permitted unless compatible with interpretive objectives.

♦ **Old-Growth Habitat:** Maintain a diversity of old-growth conifer habitats in their natural condition to favor old-growth associated fish and wildlife species. No timber harvesting will be scheduled and roads will be located outside the area when possible.

♦ **Enacted Municipal Watershed:** Manage enacted municipal watersheds to meet State Water Quality Standards for domestic use. Timber harvest is limited to insect and disease control; however, timber may be removed under conditions, which safeguard the quantity and quality of water. Roads are generally limited to those needed to administer the municipal watersheds.

♦ **LUD II:** Manage these Congressionally designated areas in a roadless state to retain their wildland character. Wildlife and fish habitat improvement and primitive recreational facility development may be permitted. Timber harvesting is limited to insect and disease control. Roads will not be built except to serve mining and other authorized activities and vital Forest transportation and utility system linkages.

♦ **Semi-Remote Recreation**: Provide motorized and non-motorized recreation opportunities in natural and natural-appearing environments where interaction with others is low and the opportunity for independence and self-reliance is moderate to high. Allow occasional concentrated recreation and tourism facilities in a natural-appearing setting. When present, roads are few and used primarily to expand and improve access to recreation opportunities or to permit access to other parts of the Forest and other ownerships. Timber harvest is limited to salvage of catastrophic events or beach log recovery.

♦ **Wild River**: Maintain and enhance the outstandingly remarkable values of river segments that qualify the river to be classified a Wild River. Shorelines are primitive and undeveloped. Timber harvesting is limited to insect and disease control. Roads are generally not present. Access is by trail, airplane, or boat.

♦ **Scenic River**: Maintain and enhance the outstandingly remarkable values of river segments that qualify the river to be classified a Scenic River. Shorelines are largely undeveloped but may be accessible in places by roads. Timber harvest is limited by the ability of the landscape to visually absorb the activity. Roads are designed to be compatible with the landscape.

♦ **Recreational River**: Maintain and enhance the outstandingly remarkable values of river segments that qualify the river to be classified a Recreational River. Shoreline development may occur and the river may be readily accessible by road. Timber harvest is allowed with priority assigned to the maintenance of existing and proposed recreation sites within the corridor. Roads are permitted.

♦ **Experimental Forest**: Manage to provide a variety of long-term opportunities for Forest research and demonstration areas. Timber harvesting will occur only for these purposes. Roads may be developed to facilitate ongoing research.

♦ **Scenic Viewshed**: Management activities are not visually apparent to the casual observer in the near distance from visual priority travel routes and use areas. In the middle to background distance, activities are subordinate to the landscape character of the area. Timber harvest is allowed and roads are permitted.

♦ **Modified Landscape**: Manage for a variety of uses. Management activities are subordinate to scenic quality as seen in the near distance. In the middle to background distance, activities may dominate but are designed to be compatible with features found in the characteristic landscape. Timber harvest is allowed and roads are permitted.

- **Timber Production**: Manage the area to maintain and promote industrial wood production. These lands will be managed to advance conditions favorable for the timber resource and for long-term timber production. Roads are permitted.

- **Minerals** - Encourage the exploration and development of mineral resources in areas having high potential for mineral commodities including nationally designated strategic and critical minerals. Until mineral activities are initiated, the area will be managed according to the underlying Land Use Designation.

- **Transportation and Utility Systems** - Emphasize existing and potential state-identified major public Transportation and Utility Systems. Until transportation or utility systems are constructed, the area will be managed according to the underlying Land Use Designation.

**(6) Appearance (Apparent Naturalness):** This section summarizes the overall scenic quality and apparent naturalness of the area. These issues are discussed in more detail in Sections II (1) and (6) of each roadless area description.

**(7) Surroundings (External Influence):** This section describes any major activities in adjacent areas that can be seen or heard from the area, as well as discussing existing management plans for adjacent lands, to the extent that these are known.

**(8) Attractions and Features of Special Interest:** This section identifies attractions or features of special interest in the area, including recreation cabins, secure anchorages, spectacular scenery, trails, hunting, fishing, and natural features. This section also indicates whether the area is a Special Interest Area and for what reasons. Special Interest Areas are areas possessing unique or unusual scenic, historic, prehistoric, scientific, natural or other characteristics. There are 23 Special Interest Areas designated on the Tongass.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** This section describes any differences between the 1989 and 2003 roadless area boundary. The boundaries of the roadless areas have been modified in many cases as a result of the updates to the Forest-wide GIS database made for this analysis. There were also modifications to roadless areas that contain isolated beach logged and helicopter units. Beach-logged and helicopter units are not identified as developed areas in the updated inventory.

## II. Capability for Management as Wilderness

This section identifies each area's capability for wilderness by describing the basic characteristics that make the area appropriate and valuable for wilderness, regardless of the area's availability and need (FSH 1909.12, Chapter 4).

**(1) Natural Integrity and Appearance (Apparent Naturalness):** This section describes the degree to which humans and past or present human activity have affected natural ecological processes and conditions in the area. It also addresses the degree to which the area's appearance is appropriate and valuable for wilderness designation.

**(2) Opportunity for Solitude and Serenity, Self-Reliance, Adventure, and Challenging Experiences, and Primitive Recreation:** This section describes opportunities for solitude and serenity in the area and considers the degree of isolation from vehicles, boats, floatplanes, and wheeled planes and the amount of recreational use of the area, as well as recreation and tourism in adjacent areas. The section also describes opportunities for self-reliance, adventure, and challenging experiences, as well as opportunities for primitive recreation in general.

This section identifies the Recreation Opportunity Spectrum (ROS) settings in acres and the number and acres of inventoried recreation places in the area (see definitions below). These acres were estimated from the Forest-wide GIS database that was updated for the SEIS analysis. Recreation Special Interest Areas are also identified in this section, as appropriate. There are 23 designated Special Interest Areas on the Tongass; 7 of these are considered Recreation Special Interest Areas.

***Recreation Opportunity Spectrum (ROS)***

The ROS system was developed by the Forest Service to help identify, quantify, and describe the wide variety of recreation settings available on the Forest. This system portrays the appropriate combination of activities, settings, and experience expectations along a continuum that ranges from highly modified to

primitive environments. Seven classifications are identified along this continuum: Urban (U), Rural (R), Roaded Natural (RN), Roaded Modified (RM), Semi-Primitive Motorized (SPM), Semi-Primitive Non-Motorized (SPNM), and Primitive (P). A general Forest-wide inventory of the ROS classification was made in 1989 and is periodically updated. This inventory was updated to reflect current conditions as part of the roadless area inventory update that was conducted to support the SEIS. Because every acre of each roadless area was not included in the inventory, the total acres with ROS classifications does not equal the total roadless area acreage; however, unclassified acres only amount to approximately 0.2 percent of the roadless acreage. The seven ROS classes are summarized in the *Recreation and Tourism* section of Chapter 3 of the SEIS.

***Recreation Places***
The pattern of use associated with known protected boat anchorages, boat landings, aircraft landing sites, and the limited road systems on the Tongass makes it possible to identify specific "recreation places." Recreation places are areas that are used for recreation activities and are easy to access. Approximately 1,436 recreation places, totaling about 4.3 million acres (approximately 25 percent of the Tongass), have been identified. The setting of a recreation place plays a key role in its attractiveness and use. Many recreation opportunities, such as viewing scenery or pursuing solitude, are dependent on this relationship and require a natural type of setting while others, such as hunting or fishing, are less dependent on the type of setting. This section of the roadless area description identifies the distribution of recreation place acres by ROS class.

**(3) Wilderness Attribute Rating System:** This section provides a brief overview of WARS. WARS measures an area's wilderness quality, based on the key attributes of wilderness as defined in the Wilderness Act, primarily natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities. This section of the roadless area description identifies the WARS rating assigned to the area as part of the 1989 AMS, as well as identifying the rating assigned as part of this updated evaluation. Differences between the 1989 and 2003 ratings are discussed. This section also identifies the ratings for sub-areas that were separated out from some of the roadless areas to exclude negative intrusions on an area's potential wilderness quality. Also, several of the larger or more complex roadless areas were subdivided and the WARS ratings assigned to each sub-area are identified here.

**(4) Ecologic and Geologic Values:** This section describes any unique ecologic and geologic values associated with the area and considers whether the roadless area is relatively isolated or part of a larger unroaded area. This section also notes whether the area is part of a Geological, Zoological, or Botanical Special Interest Area. Fourteen of the 23 designated Special Interest Areas on the Tongass are considered Geological, Zoological, or Botanical Special Interest Areas. These areas are identified in the SEIS and Appendix F of the 1997 Tongass Forest Plan Revision Final EIS (USDA Forest Service, 1997).

**(a) Fish Resources:** This subsection describes the major water bodies in the area and their fish production by species, using information from the 1998 and 2000 Anadromous Waters Catalogue databases provided by the ADF&G. The section also includes updated information from recent project level EISs, as appropriate.

The subsection also indicates whether any value comparison units (VCUs) in the area were identified as primary salmon or sport fish producers in the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998). VCUs and the Tongass Fish and Wildlife Resource Assessment are briefly described below.

***Value Comparison Units***
There are 926 VCUs on the Tongass National Forest. VCUs are distinct geographic areas that generally encompass a drainage basin containing one or more large stream systems. Boundaries usually follow easily recognizable watershed divides. These areas were established to provide a common set of areas for resource inventories and resource value interpretations.

***Tongass Fish and Wildlife Resource Assessment***
The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) presents the results of the analysis that ADF&G used to identify the highest value community use areas on the Tongass. ADF&G's analysis involved the compilation of harvest, catch, and productivity data for selected

fish and wildlife species, which were chosen to serve as indicators of the relative importance of particular areas for the production and human use of fish and wildlife. These data were systematically applied to the VCUs that comprise Southeast Alaska, with each VCU receiving a series of ranks to assess the relative resource value of each area.

ADF&G compiled data on two indicators of fishery value: salmon production and sport fishing use. Salmon production was estimated from indices of pink salmon escapement and coho salmon smolt capability. VCUs were identified as Primary Salmon Producers, Secondary Salmon Producers, or Nonproducers (salmon). The VCUs designated as Primary Salmon Producers were those that received the top scores for pink salmon escapement and coho salmon smolt capability. Sport Fishing Use data were compiled from ADF&G's statewide harvest surveys, which measure recreational fishing effort in freshwater systems and reveal angler preferences for certain fishing locations. Primary Sport Fish Producers were identified based on the top sport fishing use scores received. These classifications are discussed further in the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998).

**(b) Wildlife Resources:** This subsection describes the major wildlife that inhabit the area and considers the area's contribution to the old-growth reserve network. This subsection also indicates whether any value comparison units (VCUs) in the area were identified as important brown or black bear harvest areas in the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998). The VCUs that provide the largest harvest of bears were identified from bear harvest statistics gathered annually from 1985 to 1994. The findings of the ADF&G analysis are discussed further in the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998).

The subsection also notes whether the area is part of a Zoological Special Interest Area established for wildlife.

**(c) Threatened, Endangered, and Sensitive Species:** This subsection identifies whether the area receives use from threatened or endangered species (humpback whales and Steller sea lion) and describes any known exceptional use by sensitive species, such as goshawk, trumpeter swan, osprey, and Peale's peregrine falcon.

**(d) Karst, Cave, and Other Geologic Resources:** This subsection describes the extent and significance of any karstlands in the area and identifies any other unique or prominent geologic resources in the area. This subsection also notes whether the area is part of a Geological Special Interest Area.

**(5) Scientific and Educational Values:** This section discusses the opportunities for scientific studies, considers any special features that make the area significant, and identifies Research Natural Areas (RNAs) and Experimental Forests located in the roadless area (see definitions below). The section also considers educational values and whether the area is readily accessible to school-age children. In addition, this section notes whether the area is part of a Geological, Zoological, or Botanical Special Interest Area.

***Research Natural Areas***
Research Natural Areas (RNAs) are part of a national network of field ecological areas designated for research and education and/or to maintain biological diversity of National Forest System lands. RNAs are used for non-manipulative research, observation, and study. Six RNAs were established on the Tongass before 1996. The 1997 Tongass Land Management Plan Record of Decision (ROD) declassified one of these areas and classified seven additional areas. These areas are discussed in the *Research Natural Areas* section of Chapter 3 of the SEIS.

***Experimental Forests***
Experimental Forests provide areas for conducting manipulative research that serves as a basis for forest management. Natural resources in experimental forests are used or altered under controlled scientific studies. The Tongass currently has two Experimental Forests: Young Bay and Maybeso. These forests are discussed in the *Experimental Forests* section of Chapter 3 of the SEIS.

**(6) Scenic Values:** This section provides a general description of the scenic quality of the area. The section also identifies if the area is a Scenic Special Interest Area. Three of the 23 designated Special Interest Areas on the Tongass are considered Scenic Special Areas. This section also identifies the Visual Priority Routes and Use Areas located within or adjacent to the roadless area, as well as the percentages of the area allocated to different Existing Visual Condition and Variety Classes (see definitions below).

***Visual Priority Routes and Use Areas***
Visual Priority Routes and Use Areas were established for each Ranger District in the 1997 Tongass Forest Plan. These routes and areas are viewpoints from which scenery will be emphasized. They represent the viewpoints used to assess the existing visual condition of a project area and develop project designs that will be consistent with the adopted visual quality objectives for each LUD.

Visual Priority Routes are separated into four categories: Alaska Marine Highway, Tour Ship Routes, Roads, and Hiking Trails. Visual priority use areas are divided into eight categories: State Marine Parks; Recommended Wild, Scenic, and Recreational Rivers; Saltwater Use Areas; Dispersed Recreation Areas; Communities; Forest Service Cabins; Developed Recreation Sites; and Boat Anchorages. The identified Visual Priority Routes and Use Areas on the Tongass are listed by Ranger District in Appendix F of the 1997 Tongass Forest Plan (USDA Forest Service, 1997).

***Existing Visual Condition***
The landscape of the Tongass ranges from vast tracts unmodified by human activity to large areas with heavily modified landscapes. Existing visual condition (EVC) ratings are established to provide an indication of the current level of visual quality and visual evidence of management activities. The six EVC classes are briefly described below.

**Type I.** Appears to be untouched by human activities, except for trails needed for access; only ecological changes have occurred.
**Type II.** Changes in the landscape are not noticed unless pointed out.
**Type III.** Changes in the landscape are noticed as minor disturbances, but the natural appearance of the landscape remains dominant.
**Type IV.** Changes in the landscape are easily noticed and perceived as disturbances, but resemble natural patterns.
**Type V.** Changes stand out as a dominant impression on the landscape, yet are shaped to resemble natural patterns from 3 to 5 miles or more distant.
**Type VI.** Changes are in glaring contrast to the landscape's natural appearance; excessive visual alteration has occurred.

The existing EVC GIS coverage was updated for this analysis to include a number of managed stands. The discussion presented in this section of the roadless area description identifies the percentage of the area assigned to each applicable EVC type. Note that because every acre of each roadless area was not included in the EVC inventory, the total acreage classified does not equal the total roadless area acreage; however, unclassified acres only amount to approximately 2 percent of the roadless acreage.

***Variety Class***
Variety Class is a measure of the landscape diversity of an area. There are three Variety Classes:

**Type A.** Possesses landscape diversity unique or distinctive for the character type.
**Type B.** Possesses landscape diversity common for the character type.
**Type C.** Possesses a low level of landscape diversity.

Note that because every acre of each roadless area was not included in the Variety Class inventory, the total acreage classified does not equal the total roadless area acreage; however, unclassified acres only amount to approximately 2 percent of the roadless acreage.

**(7) Social, Cultural, and Historical Values:** This section briefly describes the known prehistoric and historical use and cultural values associated with the area. This section also indicates whether any value comparison units (VCUs) in the area were identified as subsistence areas with a high sensitivity to disturbance in the Tongass

Fish and Wildlife Resource Assessment (ADF&G, 1998) (see definition below). The discussion presented in this section also indicates whether any VCUs within the area are among the highest value community use areas identified by the ADF&G (1998) (see definition below). VCUs are described in Section II (5) (b) of this Introduction.

***Subsistence Sensitivity to Disturbance***
ADF&G ranked the subsistence sensitivity to disturbance for VCUs throughout the Tongass. Areas with a high sensitivity to disturbance are those where resource development would be expected to have the greatest impact on Southeast Alaska residents. VCUs were ranked through a community level analysis that was based on information from: ADF&G community studies and subsistence maps; the Tongass Resource Use Cooperative Survey (TRUCS); ADF&G deer and other species harvest data; historic documents, records, and reports; professional research experience of ADF&G staff; and limited community review. This is discussed further in the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998).

***Highest Value Community Use Areas***
As noted in Section II (4) (b) of this Introduction, ADF&G compiled and analyzed harvest, catch, and productivity data for selected fish and wildlife species, which were chosen to serve as indicators of the relative importance of particular areas for the production and human use of fish and wildlife. The results of this data analysis were used to identify the highest value community use areas in the state of Alaska's recommendations regarding the 1997 Tongass Forest Plan. These VCUs are identified in ADF&G (1998), as well as in Appendix L of the Tongass Land Management Plan Revision Final EIS (USDA Forest Service, 1997).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** This section describes the boundaries, size, and shape of the area with respect to its manageability as Wilderness. External factors that could affect the wilderness attributes of the area are also discussed. This section also considers whether any changes to the boundaries of the area could enhance its Wilderness manageability.

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

This section addresses the availability of the area by describing other resource potential and management considerations and by summarizing pertinent quantitative and qualitative information. The following subsections also identify the effects of wilderness designation on adjacent areas, as appropriate.

**(1) Recreation, Including Tourism Potential:** This section describes the potential for additional recreation and tourism development and recreation use in the area. It also identifies any specific proposals for development. The Alaska Visitor Association proposed developments for locations throughout the Forest in 1996. These proposals are identified in Appendix L of the 1997 Tongass Land Management Plan Revision and summarized in the roadless area descriptions, as appropriate.

**(2) Subsistence Uses:** This section describes any subsistence uses that could be precluded or affected by wilderness designation.

**(3) Fish Resources:** This section identifies whether there are any planned fish enhancement projects. There are presently 158 potential fish enhancement projects identified for implementation on the Tongass.

**(4) Wildlife Resources:** This section identifies whether there are any potential wildlife habitat improvement projects proposed for the area. The section also identifies the importance of the area in terms of its contribution to the old-growth reserve network, as appropriate.

**(5) Timber Resources:** This section describes the timber resources in the area and identifies the acres of productive old growth and acres of tentatively suitable and suitable forestland in the area (see definition below). Productive old growth, high volume productive old growth, and high-volume, coarse-canopy old growth are defined in Section I (4) (c) of this Introduction. The section also identifies how much of this land has been previously harvested, if any. These acres were estimated from the Forest-wide GIS database that was updated for this SEIS. The discussion in this section also addresses the accessibility of the timber and describes any proposed projects in

the area that are under contract, NEPA-cleared, have a Draft EIS published, or are identified in the Forest Service's 10-year plan.

***Tentatively Suitable and Suitable Lands***
The National Forest Management Act (NFMA) requires the Secretary of Agriculture to identify lands that are suitable for timber harvest. This involves two steps: 1) the identification of lands that are legally and practicably capable of timber production, called tentatively suitable lands, and 2) from the tentatively suitable lands, the selection of lands that are suitable for timber production based on all the multiple use objectives for the Forest. This is discussed in the *Timber* section of Chapter 3 of the SEIS.

**(6) Fire, Insects, and Disease:** This section identifies any fire history or unusual incidence of tree diseases or insects in the area.

**(7) Minerals:** This section discusses the level of mining claims in the area and the potential for development. The section also quantifies the acreage of mineral potential, to the extent possible, and whether all or part of the area is allocated to the Minerals LUD.

**(8) Transportation and Utilities:** This section identifies whether there are any proposed transportation corridors within or adjacent to the area.

**(9) Water Availability and Use:** This section evaluates the demand for water in this area and indicates whether there are any existing or planned hydroelectric or domestic water projects within the roadless area.

**(10) Areas of Scientific Interest:** This section identifies whether there are any RNAs or Experimental Forests within the area. RNAs and Experimental Forest are briefly described in Section II (6) of this Introduction. This section also addresses whether the area is part of a Geological, Zoological, or Botanical Special Interest Area and the potential effects of wilderness designation on these areas.

**(11) Land Use Authorizations:** This section identifies any existing special use permits or future plans for log transfer or storage facilities, transmission lines, highways, or other land use authorizations in the area.

**(12) Land Status:** This section describes the current ownership and encumbrances within and adjacent to the area. Potential land exchanges and land acquisitions are also identified in this section.

## IV. Wilderness Evaluation (Need for Wilderness)

This section summarizes the factors considered and the process used in assessing the need for each area. The section includes information from the public involvement process and interest expressed by proponents, including Congress. The section also discusses nearby wildernesses and their uses, nearby roadless areas, distance from population centers, and use trends (FSH 1909.12, Chapter 4).

**(1) Public and Congressional Interest:** This section summarizes public and Congressional interest that has been expressed in the area from a variety of sources.

**(a) Interest Expressed by Local Users and Residents:** This subsection presents the summary of local interest in the area that was originally presented in the 1989 AMS evaluation. This summary is an assessment developed by Forest Service personnel from the Ranger District managing the area that reflected local opinion in 1989.

**(b) Congressional Interest:** This subsection summarizes interest that was expressed in the area through the Alaska National Interest Lands Conservation Act (ANILCA) of 1980, House Resolution (HR) 987 of 1989, the Tongass Timber Reform Act (TTRA) of 1990, and the recent Alaska Rainforest Protection Bill (HR 2908).

**(c) Public Input During Forest Plan Revision and Appeals:** This subsection describes public input received on the area during the Forest Plan Revision and the subsequent Forest Plan Appeals.

**(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review:** This subsection describes interest received during both the Roadless Area Conservation Rule and the Road Management Policy review processes related to the Tongass.

**(e) Public Input Expressed for Project-level EISs and Other Input:** This subsection describes any other interest expressed during project-level EISs and any other relevant public comment that specifically pertains to the area.

**(f) Public Input Expressed During Supplemental EIS Process:** This subsection describes public input received following publication of this Draft SEIS, including testimony at public hearings.

**(2) Nearby Roadless and Wilderness Areas and Uses:** This section describes adjacent or nearby Roadless Areas and Wilderness and indicates the level of use of these adjacent areas where that information is available.

**(3) Distance From Population Centers (Accessibility):** This section identifies the current populations of nearby and major communities and the distances from these communities to the area.

**(4) Relative Contribution to the National Wilderness Preservation System:** This section summarizes the need and describes the relative contribution of the area to the National Wilderness Preservation System. The discussion in this section presents a brief description of the area and addresses the key wilderness attributes of natural integrity, apparent naturalness, outstanding opportunities for solitude, and primitive recreation opportunities. This discussion also addresses the supplemental wilderness and scenery attributes of the area and identifies whether there are any unique scenic, ecological, geological, cultural, or scientific or educational opportunities or resources that would be protected if the area were designated wilderness.

This section also addresses the potential relative contribution of the area by identifying the Biogeographic Province that the area is located in and describing how many other areas in this province are currently protected as Wilderness. Similarly, the Ecological Sections and Subsections of each roadless area were identified in this section and the current degree of representation of each Ecological Section and Subsection in wilderness, LUD II, and other protective LUDs was described. This section also presents the WARS rating for the area and indicates how it ranks with respect to the other Inventoried Roadless Areas evaluated as part of the analysis prepared for this SEIS.

The final part of this section summarizes the public support that has been expressed to date for designating this area wilderness, identifies other major considerations regarding relative contribution, and presents an overall conclusion regarding the relative contribution to the National Wilderness Preservation System.

## V. Environmental Consequences

This section discusses the potential environmental consequences of the alternatives upon this area. As a result, it covers the potential consequences of both a wilderness and a non-wilderness recommendation (and a partial wilderness recommendation in some cases). It also presents a table showing the acres in each LUD and the acres suitable for timber management under each alternative. Both the positive and negative impacts associated with recommending an area for wilderness designation, with recommending an area for LUD II designation (in some cases), and with maintaining it as non-wilderness are considered.

# Individual Roadless Area Descriptions

# Roadless Areas 201 – 310

**(see Volume III: Appendix C – Part 2 for Roadless Areas 311-577)**

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Fanshaw (201)

**ACRES (NFS):** 48,446

**BIOGEOGRAPHIC PROVINCE:** Central Coast Range and Northern Coast Range

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 26

### I. Overview and Description

**(1) Location and Access:** The Fanshaw Roadless Area is located on the mainland from Cape Fanshaw south to the North Arm of Farragut Bay. Frederick Sound lies to the southwest and Stephens Passage to the northwest. The roadless area is approximately 25 air miles north of Petersburg, which is on the Alaska Marine Highway and has air service. The roadless area is accessible by water and floatplane. There is no ferry service or road or trail access to the area. Boat anchorage is available in Steamboat Bay and Cleveland Passage at Fanshaw Bay and in the North Arm of Farragut Bay. Accessible shorelines suitable for landing small craft and floatplanes are found in both bays. There are no sites suitable for landing wheeled aircraft. Access inland is by foot or helicopter.

**(2) History:** The Fanshaw area is within the traditional territory of the Kake Tlingit. Extensive archaeological surveys along the coast of the roadless area identified various site types, including prehistoric period villages, camps, and culturally-modified trees. Historic period sites include cabins, fur farms, and residences. Cape Fanshaw is the site of an abandoned historic period fishing village and cannery. A post office was established at Cape Fanshaw in 1902. An historic lighthouse reserve is also at Cape Fanshaw. Historic beach logging has occurred along the shores of the roadless area.

**(3) Geography and Topography:** The Fanshaw Roadless Area contains diverse topography that ranges from large muskeg complexes to high alpine environment. Four peaks in the central and southern portion of the area are at or above 3,000 feet in elevation. Two other peaks along the northern border, Dahlgren and Fanshaw, are equal in height. Between the isolated mountains are low-lying valleys. Cat Creek is the only named drainage in the area. A tributary to the south of Cat Creek, and another feeding into the North Arm of Farragut Bay, are also significant watersheds. In the northwest corner of the area, Whitney Island and the Storm Islands are situated just off shore in Fanshaw Bay. The islands and islets total approximately 605 acres in this roadless area, two of which are over 50 acres. There are about 136 acres of alpine mapped in this area and another 225 acres of rock mapped in this area. The area contains 38 miles of shoreline along saltwater.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. Approximately 90 percent of the area is classified as being in the Central Coast Range Biogeographic Province and 10 percent is in the Northern Coast Range Province. The area is characterized by broad, low-lying valleys and several steeply rising peaks. Productive forest lands exist in river bottoms and on mountain slopes. Vegetation ranges from alpine to saltwater marshes. This province is warmer than the northern coast range province and the topography is less precipitous.

Ecological Section/Subsection. The Fanshaw Roadless Area is entirely contained within the Inside Passage Fjordlands Ecological Section (M247E) and is represented by two ecological subsections (see table below). The Cape Fanshaw Complex covers the vast majority of the area and contains rounded yet somewhat rugged glaciated mountains. Soils on the slopes are mostly productive and support a mix of hemlock and spruce. Lowlands and rolling hills are often underlain by glacial till and are poorly drained. Forested wetlands are quite abundant. The northernmost extent of sword fern and western redcedar occurs in this

subsection. The Holkham Bay Complex covers the remaining 18 percent and is along the eastern boundary of the roadless area. It is similar except for a general absence of glacial till (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Cape Fanshaw Complex | 82% |
| | Holkham Bay Complex | 18% |

**(b) Soils:** Soils in this area are formed in a wide variety of material, including bedrock and glacial drift. In general, well-drained or moderately-well-drained soils occur on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

Alpine soils, generally above an elevation of 2,000 feet, are mostly rocky, shallow, very wet organic soils.

**(c) Vegetation:** Much of the low-lying land is covered with muskeg and forested muskeg mosaic. Approximately 1,484 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Hills and side slopes of the mountains where drainage is better are covered with dense stands of Sitka spruce, western hemlock and Alaska-cedar. Spruce trees are typically found as stringers along the streams.

There are approximately 45,893 acres mapped as forest land of which 29,478 acres or 64 percent are mapped as productive old-growth forest. Of the productive old growth, 13,042 acres or 44 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 3,781 acres of high-volume, coarse-canopy old growth. There are about 31 acres of second-growth forest where beach harvest has occurred in the past.

**(d) Fish Resources:** There are nine Alaska Department of Fish and Game (ADF&G) numbered salmon producing streams within the area. Cat Creek is the largest producer. Species present in the area are pink, chum, and coho salmon, and Dolly Varden char (ADF&G Anadromous Waters Catalogue, 2000). A herring spawning area exists at the mouth of the North Arm of Farragut Bay. Farragut Bay also supports significant populations of shellfish such as Tanner crab, Dungeness crab, King crab, and shrimp.

**(e) Wildlife Resources:** A small population of mountain goats lives on the isolated mountains within the area. Black bears, Sitka black-tailed deer, and wolves are found in the area, as are an occasional brown bear and moose. The mountain lion is not known to be in this area, but is present in small numbers on the mainland. It is probably migrating into Southeast Alaska from Canada using the large rivers, such as the Stikine River, as corridors. Furbearers and other small mammals include: mink, river otters, beaver, marten, ermine, lynx, red squirrel, northern flying squirrel, porcupine, mice, shrew, and voles. There are occasional sightings of fisher and wolverine but they are at the edge of their range and are considered an incidental species. Bats are present during the summer months and occasionally over winter in man-made structures.

Bald eagles, northern goshawks, merlin, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, and pigmy owls are all found in this area. Numerous ducks, geese, sandhill cranes, trumpeter swans, marbled murrelets, and great blue herons all occur on the mainland both during migration and, in some cases, nesting. Spruce grouse, blue grouse and ptarmigan are known to occur on the mainland.

Small forest-dwelling birds that are known to occur on the mainland include; the red-throated, Pacific and common loon, and several plover, yellowlegs, and sandpiper species. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the mainland. Steller's jay, black-billed magpie, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. The American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Several amphibians are known to occur on the mainland. They are rough-skinned newts, western toad, and spotted frog. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests and in clearcuts. Spotted frogs are found primarily in lacustrine, palustrine ecosystems and are normally found in large river systems like the Stikine River.

Sea mammals known to inhabit the waters surrounding the mainland are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal.

**(5)** **Management Direction and Current Uses:** The roadless area was allocated to six land use designations (LUDs) that allow development under the 1997 Tongass Land and Resource Management Plan. These six LUDs are Timber Production, Modified Landscape, Scenic Viewshed, Semi-remote Recreation, Old-growth Habitat, and Research Natural Area.

| LUD | Acres |
|---|---|
| Timber Production | 18,906 |
| Modified Landscape | 6,546 |
| Scenic Viewshed | 9,167 |
| Semi-remote Recreation | 693 |
| Old-growth Habitat | 12,507 |
| Research Natural Area | 627 |

Most of the roadless area, approximately 71 percent, was allocated to development LUDs (Timber Production, Modified Landscape, Scenic Viewshed). The Timber Production LUD was assigned to approximately 39 percent of the roadless area. Approximately 19 percent of the roadless area, along Frederick Sound and Farragut Bay, was allocated to the Scenic Viewshed LUD. Along Cat Creek and the western side of Jamestown Peak, approximately 14 percent of the roadless area was allocated to the Modified Landscape LUD.

Approximately 29 percent of the roadless area was allocated to non-development LUDs (Semi-remote Recreation, Old-growth Habitat, Research Natural Area). The Old-growth Habitat LUD was assigned to approximately 26 percent of the roadless area and is located mainly around Fanshaw Bay, Frederick Bay, and the North Arm of Farragut Bay. Approximately 1 percent of the roadless area, on Whitney and Storm Islands, was allocated to the Semi-remote Recreation LUD. Near Fanshaw Bay, approximately 1 percent of the roadless area was designated as a Research Natural Area (RNA). The Cape Fanshaw RNA was established in 1965 to represent undisturbed old-growth Alaska yellow-cedar and western hemlock forests.

No resource development activities have yet occurred in the area. The Fanshaw Project Area timber harvest is currently under analysis. There is a lighthouse reserve on the tip of Cape Fanshaw. Recreation uses include: black bear, moose, and waterfowl hunting; marine wildlife viewing; beachcombing; sea kayaking; camping; and sightseeing from saltwater or along the shoreline. Fanshaw Bay is frequently used by recreational boaters. The marine waters of Farragut Bay, Cape Fanshaw, and Whitney Island are heavily used by commercial, sport, and personal use fishermen. The lack of public recreation cabins or commercial overnight facilities limits use by recreationists. The area is not identified as a significant subsistence area in the Tongass Resource Use Cooperative Survey (TRUCS).

**(6) Appearance (Apparent Naturalness):** The area appears unmodified except for the remains of an abandoned fur farm in Fanshaw Bay. Much of the area is visible from the Alaska Marine Highway and cruise ship routes. The roadless area appears natural from these viewpoints.

**(7) Surroundings (External Influences):** The roadless area is part of a region of several adjoining roadless areas and wilderness areas that extend along the mainland from the Misty Fiords National Monument Wilderness in the south to Glacier Bay National Park in the north. This extensive unroaded area borders other unroaded areas to the north and east in Canada. Frederick Sound and Stephens Passage lie to the west and south. They receive moderately-heavy boat traffic. Evidence of timber harvest on Kupreanof Island may be visible in the background from some portions of the Fanshaw Roadless Area.

**(8) Attractions and Features of Special Interest:** The area contains six inventoried recreation places that cover 867 acres, or 2 percent of the roadless area. These recreation places include the old fur farm. While the streams in the area offer some sport fishing opportunity, the area does not receive much use. The Cape Fanshaw Natural Area is part of the roadless area. The available anchorages provide a safe holding area for boaters during inclement weather in Frederick Sound and Stephens Passage.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** Portions of Whitney Island and Storm Island have been added to the roadless area. Lands in the northwest that have been conveyed to the State have been removed.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is essentially unmodified. Some evidence of old structures is present at the abandoned fur farm in Fanshaw Bay but is of limited magnitude and effect. Based on the natural integrity of the area, the area is suitable for wilderness classification.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and primitive recreation within the area, especially when including adjacent roadless areas. At times, low-flying airplanes may disrupt visitors for brief periods. Boats bypassing the area are generally too far offshore to cause any distraction. Present recreation use levels are low, and generally a person camped inland is unlikely to see others. The character of the landforms in the area generally allows the visitor to feel remote from the sights and sounds of human activity.

Accessing the roadless area by small boat from the community of Petersburg requires about a 2-hour crossing on exposed waters. 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 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) | 23,551 | 49% |
| Semi-Primitive Non-Motorized (SPNM) | 15,889 | 33% |
| Semi-Primitive Motorized (SPM) | 9,006 | 19% |

The area contains six inventoried recreation places that cover 867 acres, or approximately 2 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| P | 1 | 1 |
| SPNM | 1 | 1 |
| SPM | 4 | 865 |

There are no developed recreation facilities within 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 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 Fanshaw Roadless Area was given a rating of 25 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 26. The higher rating reflects the high apparent naturalness as seen by forest visitors and high ratings for primitive recreation opportunities when combined with other adjacent roadless areas.

**(4) Ecologic and Geologic Values:** This roadless area is part of a region of several adjoining roadless areas and wildernesses that extend along the mainland from the Misty Fiords National Monument Wilderness in the south to Glacier Bay National Park in the north. This extensive unroaded area borders unroaded areas to the north and east in Canada.

**(a) Fish Resources:**. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list any VCUs as primary producers of salmon or sport fish.

There are nine ADF&G numbered salmon-producing streams within the area. Two are of moderate size. Species present in the area are pink, chum, and coho salmon, and Dolly Varden char (ADF&G Anadromous Waters Catalogue, 2000). Cat Creek contains 14.2 miles of Class I and 5.3 miles of Class II streams. Cat Creek is the largest producer with an average annual peak escapement of 14,000 pink salmon. Coho, steelhead and a few chum salmon are also present. Several waterfalls approximately one mile upstream from the mouth of Cat Creek prevent anadromous fish migration upstream. North Arm Creek contains 0.25 miles of Class I stream before two waterfall barriers block anadromous migration. There is the potential for a fisheries enhancement project through modification of the barrier falls on Cat Creek. The falls at North Arm Creek are too large to be considered for modification.

**(b) Wildlife Resources:** A small population of mountain goats lives on the isolated mountains within the area. Black bears, Sitka black-tailed deer, marten, river otter, red squirrels, and wolves are found in the area, as are occasional brown bear and moose. Information from the Port Houghton Revised DEIS (USDA Forest Service, 1998) indicates that two brown bears reside near Farragut Bay. Deer densities are low because of the northern exposure of most of the area and the high average annual snowfall. There are four northern goshawk nests in the area. A 16-acre unnamed lake located between Sandborn Canal and Farragut Bay North Arm has been identified as prime Canada goose nesting habitat. Waterfowl use the limited grass flats at the head of the North Arm. The American peregrine falcon may migrate through this area. The humpback whale and the Steller sea lion use nearby waters.

**(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. Four goshawk nests have been located in this area. In addition, 12 sensitive plant species are known or suspected to occur in the Petersburg 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:** The abandoned fur farm site attracts some visitors. The Research Natural Area was established for protection and study of a stand of Alaska-cedar; however, that stand is not particularly unique. There are opportunities to study fish, forests, wildlife, and geologic processes.

**(6) Scenic Values:** The Fanshaw Roadless Area is characterized by four separate peaks and ridges with an average elevation of about 3,000 feet. From Fanshaw Bay, one views the natural state of Whitney and Storm Islands and the Fanshaw Range. However, the southeast one-third of Whitney Island is State of Alaska land, and may be developed in the future. There are low-lying valleys between the isolated mountains that can be viewed from Frederick Sound and Farragut Bay.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Frederick Sound, a part of the Alaska Marine Highway, a tour ship route, and a saltwater use area; Farragut Bay, a saltwater use area; and the Whitney Island area in Cape Fanshaw, a boat anchorage.

About 35 percent of this roadless area is inventoried Variety Class B (possessing landscape diversity that is common for the character type). The remaining 65 percent is inventoried Variety Class C (possessing a low degree of landscape diversity).

Almost the entire roadless area, 99 percent, is in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. The remaining 1 percent of the area is in EVC IV, where land alteration is obvious to visitors.

**(7) Social, Cultural, and Historical Values:** The Fanshaw area is within the traditional territory of the Kake Tlingit. There are numerous cultural resources and archaeological sites in the area, including prehistoric period villages, camps, and culturally-modified trees. Historic period use is indicated by fur farms, cabins, and the Cape Fanshaw fishing village and cannery site. In 1902, a post office was established at the village. An historic lighthouse reserve is also at Cape Fanshaw. Some beach logging has occurred in the area. This roadless area, located approximately 25 air miles from Petersburg, is accessible by boat and floatplane. There are no developed recreation facilities in the roadless area. There were six outfitter/guide permits issued in 2000 for 105 service days of remote setting nature tours and 1 service day of black bear hunting. Subsistence use of the area appears to be low. According to ADF&G records, only a few deer were harvested from this area between 1987 and 1996. Two of the five VCUs in the area (VCUs 850 and 860 at Cape Fanshaw) are listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas. No VCUs are listed among the VCUs with high community use values (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The roadless area is part of a region of several adjoining roadless areas and wildernesses that extend along the mainland from the Misty Fiords National Monument Wilderness in the south to Glacier Bay National Park in the north. This extensive unroaded area borders unroaded areas to the north and east in Canada. Frederick Sound and Stephens Passage lie to the west and south. The Fanshaw Roadless Area is adjacent to land owned by State of Alaska. This will most likely lead to development, which may not be compatible with wilderness management. Other boundaries follow topographic features. The roadless area directly adjoins other, larger roadless areas, which in turn border large wildernesses. This enhances the opportunity to mutually support the roadless, undeveloped character of each area. Except in the northwestern part of this roadless area, the boundaries are well defined. The feasibility of management as a wilderness is high except in the northwest. It could create a better-defined boundary if VCU 85 were dropped from the area considered for wilderness designation.

## 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. Petersburg is a hub for this increase in tourism and is expected to continue to be. The close proximity of the roadless area to Petersburg is likely to result in an increase in tourist interest in the roadless area. There is potential for additional outfitter and guide permits, trails, and cabins or shelters. In 1996, the Alaska Visitors Association proposed a day use recreation facility at Cape Fanshaw, with a capacity for 2,800 persons per day.

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

**(3) Fish Resources:** Construction of a fish pass at Cat Creek is being considered by the Forest Service to enhance pink salmon production.

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

**(5) Timber Resources:** There are approximately 29,478 acres mapped as productive old-growth forest and 31 acres mapped as second growth in the roadless area. Of this, approximately 19,519 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), 8,251 acres, or 17 percent of this roadless area are estimated to be suitable for timber production. Approximately 3,111 of the suitable acres are mapped as high-volume old growth; of these acres, 611 are mapped as high-volume, coarse-canopy old growth.

A timber sale project is currently being planned for this area. A Draft EIS is expected in 2004 and timber sales of 30 to 40 MMBF are scheduled for 2005.

**(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 areas with high mineral development potential in the area and no known mining claims.

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

**(9) Water Availability and Use:** There are no recreation or other facilities located in this roadless area. As a result, demand does not exist for domestic water use. There are no existing or planned hydroelectric or domestic water projects.

**(10) Areas of Scientific Interest:** There is a Research Natural Area near Cape Fanshaw. The area has not been identified for any other scientific value.

**(11) Land Use Authorizations:** Forest Service records show that six outfitter/guides used this area in 2000 for 105 service days for remote setting nature tours, and for one service day for hunting. The U.S. Coast Guard and the Federal Aviation Administration are authorized to maintain communication facilities at the Cape Fanshaw Communication Site.

**(12) Land Status:** All land within the roadless area is part of the National Forest System. Approximately 700 acres along the northwest boundary of the roadless area and on Whitney Island have been conveyed to the State.

## IV. Wilderness Evaluation (Need for Wilderness)

### (1) Public and Congressional Interest:

**(a) Interest Expressed by Local Users and Residents:** Some local interest groups have expressed interest in retaining the roadless character of this area. There is also support for developing all or part 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 Fanshaw Roadless Area. In 2001, HR 2908 proposed that the roadless area be designated as part of the Port Houghton-Farragut Bay Wilderness.

**(c) Public Input During Forest Plan Revision and Appeals:** The Southeast Alaska Conservation Council listed Farragut Bay and Cape Fanshaw as "meriting special management protection" for their outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. The Alaska Visitors Association recommended developing a day use recreation center with a daily capacity of 2,800 visitors. The Narrows Conservation Coalition and the Juneau Sierra Club mentioned the importance of the area for fishing, recreation, and subsistence. They also commented on the importance of protecting recreational and commercial anchorage, whale watching, tourism, and crab habitat. Some commenters stressed that the area was visible from cruise ships and shouldn't have timber harvest. The Narrows Conservation Coalition recommended that no log transfer facilities be developed. The timber industry wanted the area managed for 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:** Comments were received on the Port Houghton/Cape Fanshaw Timber Sale Project Revised DEIS (1998). Seventy-four individuals, organizations, and agencies submitted written comments. The Forest Service did not prepare a Final EIS. A modified timber sale is currently being planned in this area. A Draft EIS for the Fanshaw Project Area is planned for 2003. Many of the original comments on the Port Houghton/Cape Fanshaw project concerned the area around Port Houghton. The Port Houghton portion of the project has been dropped from consideration. Comments concerned the size of the harvest and other details and did not directly address the roadless issue. A guide service, Wilderness Swift Charters, commented that all the action alternatives posed a "dire threat to the stability of our business." Other guide services also expressed their opposition to timber management in the area. Many commenters felt that timber harvest would harm fishery resources in the area. Timber industry comments supported development. One industry commenter noted that subsistence use was practically nonexistent.

**(f) Public Input Expressed During Supplemental EIS Process:** The U.S. Department of the Interior identified this roadless area as having outstanding fish and wildlife values. It is one of two areas in the central mainland considered outstanding. They indicated that protecting this area, in combination with the Windham-Port Houghton Roadless Area (#308), would protect some of the most valuable remaining undisturbed forested habitats on the mainland of Southeast Alaska.

The Alaska Department of Fish and Game rated the Fanshaw roadless area as the eighth highest priority for protection in the Stikine Area. 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 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. However, they encouraged the Forest Service not to log or build logging roads in watersheds that are primary salmon producing watersheds or otherwise community use areas important to Petersburg residents including Cape Fanshaw.

The city of Kupreanof recommends the entire Port Houghton drainage, Cape Fanshaw, Farrugut Bay and the shoreline from Farrugut Bay to Thomas Bay for designation as wilderness.

The Organized Village of Kake passed a resolution requesting that "customary and traditional areas such as … Cape Fanshaw/Farragut Bay (VCUs 860-900), Port Houghton (VCUs 790-840)…" be recommended for long-term protection.

Audubon Alaska recommended that Cape Fanshaw should be protected from logging and road building.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 201, 202, 203, and 308 as a contiguous complex of roadless areas that should be considered one roadless area and recommended it for permanent protection as wilderness. SEACC identified the Fanshaw roadless area as part of the Port Houghton/Cape Fanshaw complex (RAs 201, 202, and 308), which should be considered one contiguous roadless area recommended for permanent protection as wilderness. They indicated that if this complex were designated, it would create a contiguous wilderness along the central mainland coast of nearly 2 million acres, making it the second largest Forest Service Wilderness in the nation.

A number of individuals identified Cape Fanshaw as an area that needed permanent protection.

**(2) Nearby Roadless and Wilderness Areas and Uses:** Admiralty Island National Monument-Kootznoowoo Wilderness lies across Stephens Passage about 15 miles to the west. The Fanshaw area is part of a region of several adjoining roadless areas and wilderness areas that extend along the mainland from the Misty Fiords National Monument Wilderness in the south to Glacier Bay National Park in the north. This extensive unroaded area borders unroaded areas to the north and east in Canada. This enhances the opportunity to mutually support the roadless, undeveloped character of each area. Use of the mainland areas can be very high, as is the case for the Juneau Icefield, where tourism accounts for a very high level of use. Other mainland areas receive light use inland with slightly higher use along saltwater shorelines. Admiralty Island gets slightly higher use because of its hunting opportunities.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 80 | 85 |
| Ketchikan (Pop. 14,070) | 130 | 160 |
| Wrangell (Pop.2,308) | 60 | 60 |
| Petersburg (Pop. 3,324) | 25 | 30 |

Petersburg is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Fanshaw Roadless Area is located on the mainland at Cape Fanshaw and extends south to the North Arm of Farragut Bay. The roadless area contains four separate peaks and ridges with an average elevation of about 3,000 feet. One peak reaches over 3,500 feet. Between the isolated mountains are low-lying valleys.

The area has very high natural integrity and outstanding apparent naturalness. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

None of the landscape in the area is considered distinctive for the character type from a scenery standpoint. The Cape Fanshaw Research Natural Area is located in the roadless area. The area has important cultural and historic values.

The roadless area includes about 13,042 acres of high-volume, old-growth forest. Of these acres, 3,781 are mapped as high-volume, coarse-canopy old growth.

Approximately 90 percent of the Fanshaw Roadless Area lies within the Central Coast Range Biogeographic Province and makes up about 6 percent of the province. It is one of nine inventoried roadless areas found in the province that collectively make up about 59 percent of the province. Portions of the Stikine-LeConte Wilderness also lie within the Central Coast Range province and make up about 38 percent of the province. The remaining 10 percent of the Fanshaw Roadless Area lies within the Northern Coast Range Province and makes up less than one percent of the province. Six other inventoried roadless areas make up approximately 66 percent of the province. About 25 percent of this province is covered by the Tracy Arm-Fords Terror Wilderness.

The Fanshaw 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, an additional 2 percent is in existing LUD II, and an additional 30 percent is protected by other existing non-development LUDs.

Approximately 82 percent of the roadless area is in the Cape Fanshaw Complex Ecological Subsection; this portion of the roadless area represents 58 percent of the entire ecological subsection. Only about 0.1 percent of this ecological subsection is located in existing wilderness, but 29 percent is protected by other existing non-development LUDs. The remaining 18 percent of the roadless area is in the Holkham Bay Complex Ecological Subsection; this portion of the roadless area represents 2 percent of the entire ecological subsection. Approximately 32 percent of this ecological subsection is in existing wilderness and an additional 28 percent is protected by other existing non-development LUDs.

The Fanshaw 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 5$^{th}$ from the highest (along with 6 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 wilderness. Designation would create a wilderness with a small portion (less than 1 percent) of it being the Cape Fanshaw RNA that has some cultural and historic values along the coast. Designation would likely be considered along with the Spires and portions of the Windham-Port Houghton Roadless areas that abut the Fanshaw Roadless Area. Designation of the area would add Congressional protection to approximately 58 percent of the Cape Fanshaw Complex Ecological Subsection that has very little area 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 high to very high.

## V. Environmental Consequences

The Fanshaw Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 is implemented. Approximately 29 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 71 percent. The land in the development LUDs provides an estimated 8,251 acres that are suitable for timber production (5 percent of the suitable acres on the Petersburg Ranger District). Approximately 611 of the suitable acres are classified as high-volume, coarse-canopy old growth. The timber sales, recreation, 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. The high cultural and historic values, the Cape Fanshaw Research Natural Area, and most of the high scenic values of the roadless area would be protected under the Forest Plan standards and guidelines.

Under Alternatives 6, 7, or 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed. The ongoing recreation, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress.

Designation of the area as wilderness would add Congressional protection to approximately 58 percent of the Cape Fanshaw Complex Ecological Subsection that has very little acreage in wilderness or LUD II. The values associated with the natural settings of the roadless area would be provided long-term protection if designated wilderness. The high cultural, historic and scenic values would be protected in full.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 201 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | 48,446 | 48,446 | 48,446 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | 627 | 627 | 627 | 627 | 627 | | | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | | | | | | | | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | 12,507 | 12,507 | 12,507 | 12,507 | 12,507 | | | |
| Semi-remote Recreation | 693 | 693 | 693 | 693 | 693 | | | |
| Recommended LUD II | | | | | | | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 9,167 | 9,167 | 9,167 | 9,167 | 9,167 | | | |
| Modified Landscape | 6,546 | 6,546 | 6,546 | 6,546 | 6,546 | | | |
| Timber Production | 18,906 | 18,906 | 18,906 | 18,906 | 18,906 | | | |
| **TOTAL** | **48,446** | **48,446** | **48,446** | **48,446** | **48,446** | **48,446** | **48,446** | **48,446** |
| Suitable Timber Lands | 8,251 | 8,251 | 8,251 | 8,251 | 8,251 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Spires (202)

**ACRES (NFS):** 542,829

**BIOGEOGRAPHIC PROVINCE:** Central Coast Range and Ice Fields

**ECOLOGICAL SECTION:** Boundary Ranges and Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 26 (27)

### I. Overview and Description

**(1) Location and Access:** The Spires Roadless Area is located on the mainland, from the Port Houghton drainage and Tracy Arm-Fords Terror Wilderness on the north to the Stikine-LeConte Wilderness on the south. It is adjacent to Frederick Sound on the southwest and to the Canadian border on the east. Two other inventoried roadless areas border the area to the west, Fanshaw (201) and Windham-Port Houghton (308). The roadless area is approximately 10 air miles northeast of Petersburg, which is on the Alaska Marine Highway and has air service. The area is accessed by boat on saltwater and by floatplane on saltwater and several freshwater lakes. Anchorages are available in Farragut and Thomas Bays. Accessible shorelines suitable for landing small craft and floatplanes are found in both bays. There are no sites suitable for landing wheeled aircraft. Commercial helicopter landings in support of tourism activities occur in the ice fields of the area. There is no ferry service or road access to the area from outside, but there is road access from the south end of Thomas Bay at Point Agassiz to the Muddy and Patterson Rivers. Vehicles are typically transported via landing craft from Petersburg. Interior access is by foot or helicopter. There are several trails leading from saltwater inland.

**(2) History:** The Farragut and Thomas Bay areas are in the traditional territory of the Stikine Tlingit. A variety of archaeological sites exist in the area, including prehistoric period villages, camps, petroglyphs, and culturally-modified trees. Historic period use is rather extensive, especially at Point Agassiz, where a homestead community was established during the first quarter of the twentieth century. Homesteads are also located at the mouth of the Farragut River. The Gardner Shrimp Company cannery was established on Ruth Island in Thomas Bay in 1916. In 1958, logging began in the Muddy and Patterson River drainages. Beach logging occurred in Farragut Bay, on Point Vandeput, and at Wood Point. Gravel was excavated near the mouth of the Muddy River on a commercial basis for several years. Mining activities have occurred in the Thomas Bay area.

**(3) Geography and Topography:** The area is generally characterized as highly complex terrain dominated by rugged mountains, many of which reach elevations of more than 5,000 feet. The tallest peak is over 9,000 feet. Between the mountains are deep valleys and numerous glaciers. About 237,931 acres are mapped as ice and snow, 132,583 acres are classified as rock, and another 2,905 acres as alpine. Near the shore, the landforms become gentler and include large outwash plains from the Farragut, Muddy, and Patterson Rivers. These rivers are rather short (4 to 12 miles) and of glacial origin. Dominant waterforms include two major saltwater bays and several high-elevation lakes totaling approximately 4,762 acres. Swan, Spurt, DeBoer, Scenery, Ruth, Farragut, and Glory Lakes are all in this roadless area. The area contains 84 miles of saltwater shoreline with approximately 1,537 acres of islands and islets.

**(4) Ecosystem:** The Patterson Glacier Geological and Botanical Area is a Special Interest Area with a glacial history that includes outstanding examples of plant succession and other interesting glacial-related features.

> **(a) Classification:** Biogeographic Province. The Spires Roadless Area is in two biogeographic provinces (Central Coast Range and Ice Fields Biogeographic Provinces). The lower elevation (southwestern) portion of the Spires Roadless Area is classified as being in the Central Coast Range Biogeographic Province. The area is characterized by broad, low-lying valleys and several steeply rising peaks. Productive forest lands exist in river bottoms and on mountain slopes. Vegetation ranges from

sub-alpine to saltwater marshes. This province is warmer than the northern coast range province and the topography is less precipitous. The Stikine River system is located south of the Spires Roadless Area in the center of the province and has a major continental influence, providing a migration corridor for plant and animal species. The upper elevation (northeastern) portion of the Spires Roadless Area is classified as being in the Ice Fields Biogeographic Province. This province is dominated by ice fields, active glaciers, and nunataks (mountain peaks between the glaciers). The roadless area contains a large area of highly vulnerable karst. There are no unique plant or soil associations in the roadless area.

Ecological Section/Subsection. The Spires Roadless Area is contained mostly within the Boundary Ranges Ecological Section (M246B) and also contains portions within the Inside Passage Fjordlands Ecological Section (M247E). These areas are represented by five ecological subsections (see table below). The Boundary Ranges Icefields Ecological Subsection represents the majority, about 78 percent, of the Spires 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 make up a minor part of the vegetation along coasts and rivers. Of the four lower elevation subsections that form the Inside Passage Fjordlands portion of the roadless area, the Holkham Bay Complex is the most prevalent at 12 percent of the roadless area. This subsection contains rounded, yet somewhat rugged glaciated mountains with forested slopes on mostly productive soils. Poorly drained soils dominate the lowlands and rolling hills and glacial till is generally absent (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Boundary Ranges | Boundary Ranges Icefields | 78% |
| Inside Passage Fjordlands | Cape Fanshaw Complex | 2% |
| | Holkham Bay Complex | 12% |
| | Thomas Bay Outwash Plains | 2% |
| | Eastern Passage Complex | 5% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock and glacial drift. In general, well-drained or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More poorly-drained soils developed on less sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg. Alpine soils, generally above an elevation of 2,000 feet, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Alpine vegetation (mapped as 2,905 acres) dominates above an elevation of 2,500 feet. Below that elevation, the mountains, hills, and well-drained outwash plains are dominated by heavy stands of western hemlock, Sitka spruce, and Alaska yellow-cedar. Some of the low-lying, poorly-drained land is covered with muskeg (mapped as 1,148 acres) supporting shore pine and cedar. Spruce trees are also typically found as stringers along the streams.

There are approximately 137,665 acres mapped as forest land of which 68,044 acres or 49 percent are mapped as productive old-growth forest. Of the productive old growth, 31,965 acres or 47 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 3,489 acres of high-volume, coarse-canopy old growth. There are about 895 acres of second-growth forest where beach harvest has occurred in the past.

**(d) Fish:** Thirteen Alaska Department of Fish and Game (ADF&G) numbered salmon-producing streams are present within the area. The Farragut River, the Muddy River, and Dry Bay Creek are the best salmon producers. There are runs of pink, chum, coho, sockeye, and chinook salmon, as well as and

steelhead, rainbow, and cutthroat trout, and Dolly Varden char in the Farragut River (ADF&G, 2000). Marine and intertidal waters support significant populations of Tanner crab, Dungeness crab, King crab, and various species of shrimp and clams.

**(e) Wildlife:** A population of mountain goats lives in the area. Black bears, wolves and Sitka black-tailed deer are found in the area, as well as an occasional brown bear and a moderate population of moose. The mountain lion is not known to be in this area, but is present in small numbers on the mainland. It is probably migrating into Southeast Alaska from Canada using the large rivers, such as the Stikine River, as corridors.

Furbearers and other small mammals include; mink, river otters, beaver, marten, ermine, lynx, red squirrel, northern flying squirrel, porcupine, mice, shrew, and voles. There are occasional sightings of fisher and wolverine but they are at the edge of their range and are considered an incidental species. Bats are present during the summer months and occasionally over winter in man-made structures.

Bald eagles, northern goshawks, merlin, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, and pigmy owls all are found in this area. Numerous ducks, geese, sandhill cranes, trumpeter swans, marbled murrelets, and great blue herons all occur on the mainland both during migration and, in some cases, nesting. Spruce grouse, blue grouse, and ptarmigan are known to occur on the mainland.

Small forest-dwelling birds that are known to occur on the mainland include; the red-throated, Pacific and common loon, and several plover, yellowlegs, and sandpiper species. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the mainland. Steller's jay, black-billed magpie, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. The American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Several amphibians are known to occur on the mainland. They are rough-skinned newts, western toad, and spotted frog. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests and in clearcuts. Spotted frogs are found primarily in lacustrine, palustrine ecosystems and normally found in large river systems like the Stikine River.

Sea mammals known to inhabit the waters surrounding the mainland are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal.

**(5) Management Direction and Current Uses:** This area was allocated to seven Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These seven LUDs are Scenic Viewshed, Timber Production, Modified Landscape, Semi-remote Recreation, Special Interest Area, Wild River, and Old-growth Habitat.

| LUD | Acres |
|---|---|
| Scenic Viewshed | 19,235 |
| Timber Production | 19,424 |
| Modified Landscape | 12,176 |
| Semi-remote Recreation | 456,924 |
| Special Interest Area | 13,760 |
| Wild River | 13,186 |
| Old-growth Habitat | 8,124 |

Approximately 9 percent of the roadless area, near Frederick Sound, was allocated to development LUDs (Scenic Viewshed, Timber Production, Modified Landscape). The Timber Production LUD was assigned to approximately 4 percent of the roadless area. One area of the Timber Production LUD is east of the Farragut River at Dry Bay and one is south of Thomas Bay. Approximately 4 percent of the roadless area was allocated to the Scenic Viewshed LUD. These areas are located along Frederick Sound and in Upper Delta Creek. The Modified Landscape LUD was assigned to approximately 2 percent of the roadless area.

Most of the roadless area, approximately 91 percent, was allocated to non-development LUDs (Semi-remote Recreation, Special Interest Area, Wild River, and Old-growth Habitat). Approximately 84 percent of the roadless area was allocated to the Semi-remote Recreation LUD. Approximately 3 percent of the roadless area, in the southern part of the area, was allocated to the Special Interest Area LUD. Land in the Special Interest LUD creates the Patterson Glacier Geological and Botanical Area. This Special Interest Area has unique geological and botanical features that are protected for public use, study, and enjoyment. The Farragut River, Farragut Lake, and Glory Lake are allocated to the Farragut River Wild River LUD, which accounts for approximately 2 percent of the roadless area. Approximately 1 percent of the roadless area was allocated to the Old-growth Habitat LUD.

Recreation uses include moose, deer, black bear, mountain goat, and waterfowl hunting; coho salmon, pink salmon, steelhead, and trout fishing; sea kayaking; boating; camping; hiking; beachcombing; helicopter skiing; cross-country skiing; snowmobiling; sightseeing; flightseeing; mountain climbing; tour boat use; and recreation cabin use. Thomas and Farragut Bays are frequently used by recreational boaters and commercial fishing boats. There are four public recreation cabins in this area, two on the shores of Thomas Bay, one cabin at Swan Lake, and one at DeBoer Lake. Trails in the area include the Cascade Creek Trail (4.5 miles) and the Spurt Lake Trail (1.1 miles). There are no commercial overnight facilities in the area. Moose hunting is popular during the fall. Current information indicates that some subsistence activities occur, primarily from residents of Petersburg.

The Crystal Creek Timber Sale is currently under contract, and will extend the existing road system into the roadless area and harvest timber in the Muddy and Patterson River drainages as well as the Crystal Creek drainage. The log transfer facility, most of the road construction, and the timber harvest units are currently under contract. Other timber sales are planned according to the Crystal Creek Timber Harvest FEIS (USDA Forest Service, 1998). Additional timber harvest projects in this area are on the 10-year timber sale schedule.

**(6) Appearance (Apparent Naturalness):** Most of the area appears unmodified. However, the timber management developments around Thomas Bay and in the Muddy and Patterson River valleys give the adjacent roadless area a modified appearance.

**(7) Surroundings (External Influences):** The roadless area is part of a very large unroaded area extending along the mainland from the Misty Fiords National Monument Wilderness in the south to Glacier Bay National Park in the north. This extensive roadless area borders unroaded areas to the north and east in Canada. The roadless area abuts the Fanshaw Roadless Area and the Tracy Arm-Fords Terror Wilderness on the north and the Stikine-LeConte Wilderness on the south. Land across the Canadian border to the east is mostly rugged mountains and glaciers. Moderately heavy boat traffic passes along the southwest of the roadless area in Frederick Sound and in Thomas and Farragut Bays. Evidence of timber harvest in the Muddy and Patterson River valleys and along one slope of Farragut Bay is visible from some locations within the roadless area. Inhabited and abandoned buildings on the private land adjoining the area may be visible from some places in the roadless area. Jet aircraft approaching Petersburg occasionally pass over portions of the area at elevations of less than 10,000 feet. Small aircraft may land on lakes in parts of the roadless area. Small aircraft and helicopters fly over the area on flightseeing tours, and approximately 750 helicopter landings for tourism activities are permitted.

**(8) Attractions and Features of Special Interest:** Thomas Bay and, to a slightly lesser degree, Farragut Bay, are destination attractions for residents of Petersburg. The public recreation cabins, the saltwater fishing, the outstanding scenery, opportunities to hunt waterfowl, mountain goats, and moose, opportunities to run small boats on the Farragut River, and the opportunity to walk the trails and logging roads are special features. This area also offers opportunities for mountain climbing and backcountry skiing. The glaciers are popular for flightseeing via helicopter or airplanes. Patterson Glacier Geological and Botanical Special Interest Area has outstanding examples of plant succession in its geologic history and other interesting glacial-related features. The public recreation cabins

at DeBoer and Swan Lakes offer fly-in trips and freshwater fishing opportunities. The area contains 21 inventoried recreation places that cover 15,672 acres, or 3 percent of the roadless area. There are approximately 6 miles of improved trails in the area. The presence of good anchorage sites allows boaters to stay in the area overnight.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** Some areas along the shore that have been beach logged but not roaded have been added to the roadless area. Small adjustments have been made to the boundary along the developed areas between the Draft and Final SEIS to improve manageability in those areas.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** Nearly all of the roadless area is unmodified and natural appearing. The exceptions are the areas adjacent to the Thomas Bay/Muddy and lower Patterson River valleys. Because of its overwhelmingly natural state, this area is suitable for wilderness classification.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and primitive recreation within the area. At times, low-flying airplanes or helicopters may disrupt visitors for brief periods. Passing boats are generally far enough offshore so as not to cause any distraction. Present recreation use levels are low except in the immediate vicinity of the public recreation cabins, along the shoreline, or at flightseeing destinations. Generally, a person camped inland is unlikely to see others. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity.

Accessing the roadless area by boat from the community of Petersburg requires a 1- to 2-hour crossing on exposed waters. While there are trails accessing some portions of the roadless area, much of the area is extremely difficult to cross. 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 and semi-primitive 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) | 446,211 | 82% |
| Semi-Primitive Non-Motorized (SPNM) | 69,036 | 13% |
| Semi-Primitive Motorized (SPM) | 23,066 | 4% |
| Roaded Modified (RM) | 4,415 | 1% |

The area contains 21 inventoried recreation places that cover 15,168 acres, or 3 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| P | 3 | 5,357 |
| SPNM | 4 | 1,392 |
| SPM | 12 | 5,851 |
| RM | 2 | 2,567 |

There are four public recreation cabins, two maintained trails, and two abandoned trails.

**(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 Spires Roadless Area was given a rating of 27 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 26, which reflects the use and developments associated with Thomas Bay/Muddy and Patterson Rivers and the public recreation cabins in the area. A rating of 27 was achieved when the Thomas Bay/Muddy and Patterson Rivers area developments were separated from the roadless area.

**(4) Ecologic and Geologic Values:** This roadless area is part of a region of several adjoining roadless areas and wilderness areas that extend along the mainland from the Misty Fiords National Monument Wilderness in the south to Glacier Bay National Park in the north. This extensive unroaded area borders other unroaded areas to the north and east in Canada. The Patterson Glacier Geological and Botanical Special Interest Area has an outstanding example of plant succession in its glacial history and has other interesting glacial-related features.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment rated VCUs 90, around Farragut Bay, and 489, at the entrance to Thomas Bay as primary salmon producers. VCUs 481, 486, and 488, mostly interior VCUs, are listed as non-producers of salmon. None of the VCUs are listed as primary producers of sportfish (ADF&G, 1998).

Thirteen ADF&G numbered salmon producing streams are present within the area. The Farragut River, Muddy River, and Dry Bay Creek are the best salmon producers. There are runs of pink, chum, coho, sockeye and chinook salmon, as well as and steelhead, rainbow, and cutthroat trout, and Dolly Varden char in the Farragut (ADF&G, 2000). The Farragut River has high commercial and sport fish values, with an estimated annual peak escapement of 22,000 pink salmon, as well as high scenic and wildlife values. This river has a significant chinook salmon run and the lower ten miles is considered high quality fish habitat. The headwaters of the Muddy River are located in this roadless area. This river has an estimated annual peak escapement of 30,800 pink salmon and a significant run of chum salmon. Dry Bay Creek has an average annual peak escapement of 13,500 pink and 2,000 chum salmon. Coho salmon, Dolly Varden char, and steelhead are also present. A good number of rainbow trout are available in Swan Lake. The Anadromous Waters Catalogue and Atlas (ADF&G, 2000) also shows anadromous fish habitat in Scenery Creek, Patterson River, Ess Lake, and Brown Cove Lake. Scenery Creek has habitat for coho, chum, and pink salmon; steelhead; and Dolly Varden char. Ess Lake, and portions of the Patterson River that lie in this roadless area, provide habitat for coho salmon and Dolly Varden char. Brown Cove Lake provides habitat for Dolly Varden char and cutthroat trout. Marine and intertidal areas support high commercial, personal use, and recreational fisheries for Tanner, Dungeness, and King crab, and various species of shrimp and other shellfish.

**(b) Wildlife Resources:** A small population of mountain goats lives in the area. Black bears, Sitka black-tailed deer, and a relatively high density of wolves are found in the area, as well as an occasional brown bear and a moderate population of moose, marten, and beaver. Patterson River supports the highest density of moose in Southeast Alaska. Waterfowl use the extensive grassflats at the head of Farragut Bay and smaller areas around Thomas Bay, and nesting Canada geese are common near Thomas Bay. Moose and mountain goats are important species for sport hunting and subsistence. There are several northern goshawk nesting sites in the area. The humpback whale and the Steller sea lion use the marine waters adjacent to the roadless area, although there are no sea lion haulout sites or other concentrations of marine wildlife in the vicinity of this roadless area. Based on harvest data compiled from 1985 to 1995, one of the VCUs, 90, surrounding Farrugut Bay, was ranked in the second 25 percent of brown bear harvest areas on the Tongass.

**(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. Ospreys have nested at Thomas Bay and have been seen at Swan Lake. 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. Several goshawk nests have been found in the area. In addition, 12 sensitive plant species are known or suspected to occur in the Petersburg Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There is a relatively large area of high vulnerable karst east of Thomas Bay near Foote Peak and Cosmos Range, and two smaller areas near House Peak. There are 2,796 acres, or less than 1 percent of the roadless area, mapped as karst resources. There are numerous glaciers in this area, including Baird Glacier, Oasis Glacier, Witches Cauldron, Patterson Glacier, and portions of LeConte Glacier. Patterson Glacier Geological and Botanical Special Interest Area has a geological history that includes an outstanding example of plant succession and other interesting glacial-related features. There are a few small outcrops of metacarbonate rocks east of Thomas Bay. These outcrops are currently being mapped by the U.S. Geological Survey.

**(5) Scientific and Educational Values:** Besides outstanding scenery, there are opportunities to observe a wide spectrum of ecological progressions, from bare rock at the face of receding glaciers to climax stands of old-growth forest, all within a short geographic distance and relatively close to Petersburg. Near Patterson Glacier are the remains of a forest once buried during a glacial advance. The Patterson Glacier Geological and Botanical Special Interest Area provides an opportunity to study plant succession and other glacial-related features. The area near Ess Lake is also the setting for a popular local account of strange phenomena featured in the book "The Strangest Story Ever Told."

**(6) Scenic Values:** The area exists in an unmodified visual condition. Some of the foreground along Frederick Sound and the higher elevation areas are visible from present ferry and small cruise ship routes. At higher elevations, the landscape offers spectacular scenery.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Frederick Sound, a part of the Alaska Marine Highway, a tour ship route and a saltwater use area; Farragut and Thomas Bays, saltwater use areas; Farragut River, a dispersed recreation area and a recommended Wild and Scenic River; Scenery Lake, Glory Lake, Swan Lake, DeBoer Lake, Spurt Lake, Scenery Creek to Scenery Lake area, and Dry Bay, which are dispersed recreation areas; Thomas Bay and Spurt Cove, used as boat anchorages; DeBoer and Swan Lake, Spurt Cove, and Cascade Creek, which have Public Recreation Cabins; Spurt Lake Hiking Trail #457; and Cascade Creek Hiking Trail/Falls Lake Shelter #458.

About 83 percent of this roadless area is inventoried Variety Class A (possessing landscape diversity that is unique for the character type). Fifteen percent is inventoried Variety Class B (possessing landscape diversity that is common for the character type), and the remaining 2 percent is Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, 98 percent, is in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. The remaining 2 percent of the area is divided between EVC IV and EVC V, where changes in the landscape are obvious to the average person, and/or appear to be major disturbances.

**(7) Social, Cultural, and Historical Values:** The Farragut and Thomas Bay areas are in the traditional territory of the Stikine Tlingit. Archaeological sites in the area include villages, camps, petroglyphs, culturally-modified trees, cabins, and historic period trails. In 1958, logging began in the Muddy and Patterson River drainages and continued until recently. Beach logging occurred in Farragut Bay, on Point Vandeput, and at Wood Point. Gravel was excavated near the mouth of Muddy River on a commercial basis for several years. Several homesteads were located near the mouth of Farragut River and on the Point Agassiz Peninsula near Thomas Bay. The Point Agassiz settlement was established during the first quarter of the 20$^{th}$ century. A schoolhouse was built there in 1920 and remains there today. Several private cabins and homes are still located on private land adjacent to

the roadless area. Thomas Bay and, to a slightly lesser degree, Farragut Bay, are destination attractions for residents of Petersburg. Three VCUs , 486, 487, and 489 that are on the southern shore of Thomas Bay, were among the VCUs listed as highest sensitivity to disturbance of subsistence use areas. VCU 489, along Frederick Sound up to the entrance to Thomas Bay, was listed among the VCUs in the second most important group for community use values. No VCUs were listed in the most important group (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** The area is well defined on the southwest by saltwater shoreline, except for the area around the Thomas Bay/Muddy and Patterson Rivers. The topographic divides are, for the most part, well defined. Feasibility of management in a roadless condition is high, except around the Thomas Bay/Muddy and Patterson Rivers. Dropping VCUs 487 and 489, which are mostly development LUDs with existing roads, would establish better-defined boundaries in the southwest. The Spires Roadless Area could be managed with Roadless Areas 201 and 308 to the west in several different logical topographical boundaries. This is especially the case if the portion of Roadless Area 308 that included the Sandborn Canal and Port Houghton watersheds, which contain significant scenic, recreation, fish, wildlife, and geologic resources. However, the relatively high recreation uses, including helicopter landing tours, in the Spires Roadless area and Port Houghton watershed make the areas less desirable for wilderness management.

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

**(1) Recreation, Including Tourism Potential:** The icefields have growth potential for floatplane flightseeing and helicopter tours. Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Petersburg is a hub for this increase in tourism and is expected to continue to be a center of growth. The close proximity of the roadless area to Petersburg is likely to result in an increase in tourist interest in the roadless area. The roadless area currently provides over 1,000 recreation special use permitted service days per year. There is high potential for additional outfitter/guide permits and for additional trails, cabins, or shelters. A trail from Spurt Cove to the Spurt Lake Trail is being considered. The beauty, diversity and accessibility of Thomas Bay make it a promising area for increased sightseeing and excursion trip opportunities.

In 1996, the Alaska Visitor Association (AVA) proposed hut-to-hut rafting, canoeing, kayaking, and a leased proprietary camp with a capacity for 15 camp units on Farragut River. The AVA also proposed a recreation development for Thomas Bay, which included a leased proprietary camp with a capacity of 15 tent platforms. Finally, the AVA proposed a shoreline excursion in the Cascade Creek area for small cruise ship passengers.

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

**(3) Fish Resources:** There is upwelling springs at the mouth of the drainage for Brown's Lake on the Muddy River. There is also potential for a barrier modification project to enhance fish habitat on the Farragut River.

**(4) Wildlife Resources:** No wildlife enhancement projects are currently being considered in the roadless area.

**(5) Timber Resources:** There are approximately 68,044 acres of productive old-growth forest and 895 acres of second growth mapped in the roadless area. Approximately 37,004 acres of the area 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), 6,833 acres, or 1 percent of this roadless area, are estimated to be suitable for timber production. Approximately 2,811 of the suitable acres are mapped as high-volume old growth; of these acres, 325 are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area is closely linked to the existing road system near Thomas Bay, or development of additional log transfer facilities (LTF's) in Thomas and Farragut Bays. Any significant amounts of timber harvested from this area would have to be hauled to either of those bays to be placed in the water and towed to a mill. The Crystal Creek Timber Sale is presently under contract to extend the existing road system into the roadless area and harvest timber in the Muddy River, Patterson River, and Crystal Creek drainages. Other timber sales are planned under the Crystal Creek EIS (USDA Forest Service, 1998), and additional projects are planned in the 10-year timber sale schedule.

**(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 some mineral exploration in the past. The area within and adjacent to the Patterson River corridor has been identified by the U.S. Bureau of Land Management and the USGS as having potential for mineral development, but there are no known mining claims. This roadless area contains an estimated 175,756 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 corridors proposed in the roadless area. The Scenery Lake and Swan Lake drainages have been identified by the Federal Power Commission as potential hydropower generation sites and are withdrawn from other management considerations. Several proposals have been made over the years to develop the hydropower potential at Swan Lake, but to date no development has taken place and is not likely in the immediate future.

**(9) Water Availability and Use:** The four existing recreation cabins and a fish camp create a surface water demand in this area. There are no existing or planned hydroelectric or domestic water projects in the Spires Roadless Area.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas. There are karst resources in the area, encompassing about 2,796 acres or less than one percent of the roadless area. The Patterson Glacier Geological and Botanical Special Interest Area provides an opportunity to study plant succession and other glacial-related features. Management of the area as wilderness may restrict research activities.

**(11) Land Use Authorizations:** Forest Service records show that 11 outfitter/guides used this area in 2000 for three service days for freshwater fishing, 313 service days for remote setting nature tours, 17 service days for black bear hunting, 31 service days for mountain goat hunting, and 727 service days for helicopter landing tours.

An isolated recreation residence cabin is authorized near Farragut Bay and a tent platform is authorized near Brown Cove Lake.

**(12) Land Status:** The entire area is National Forest System land. There is state and private land adjacent to the roadless area, in Thomas Bay (Point Agassiz) and Farragut Bay, and along the lower part of the Farragut River.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Local Petersburg residents have a high degree of interest in how this area is managed. There was a strong protest when the State of Alaska considered subdividing and selling land in Thomas Bay.

**(b) Congressional Interest:** In 1989, U.S. House of Representatives Bills HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Spires Roadless Area. In 2001, HR 2908 proposed that the northern portion of the roadless area be designated as part of the Port Houghton-Farragut Bay Wilderness and that the southern portion be designated as the Thomas Bay-Twin Peaks Wilderness.

**(c) Public Input During Forest Plan Revision and Appeals:** The Southeast Alaska Conservation Council listed Farragut Bay as “meriting special management protection” for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. In 1996, the AVA proposed hut-to-hut rafting, canoeing, kayaking, and a leased proprietary camp with a capacity for 15 camp units on the Farragut River. The AVA also proposed a recreation development for Thomas Bay, which included a lease proprietary camp with a capacity of 15 tent platforms. Another suggestion by the AVA was a beach excursion on Cascade Creek for small cruise ship passengers. The Narrows Conservation Coalition and the Juneau Sierra Club mentioned the importance of the area for fishing, recreation, and subsistence. They also

commented on the importance of protecting recreation and commercial anchorage, whale watching, tourism, and crab habitat. Some commenters stressed that the area was visible from cruise ships and shouldn't have visible timber harvest. The Narrows Conservation Coalition recommended that no log transfer facilities be developed at Brown Cove. The timber industry wanted the area managed for timber production. The City of Petersburg supports the continued federal power site designation for Cascade Creek and Scenery Creek in Thomas Bay and urges the Forest Service maintain these designations.

**(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 were received on the Crystal Creek Timber Harvest Project DEIS (USDA Forest Service, 1997). Thirteen persons, agencies, and organizations commented. None of the comments dealt with wilderness or roadless area issues.

**(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 Kupreanof recommends the entire Port Houghton drainage, Cape Fanshaw, Farrugut Bay and the shoreline from Farrugut Bay to Thomas Bay for designation as wilderness.

The Organized Village of Kake passed a resolution requesting that "customary and traditional areas such as … Cape Fanshaw/Farragut Bay (VCUs 860-900), Port Houghton (VCUs 790-840)… be recommended for long-term protection.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 201, 202, 203, and 308 as a contiguous complex of roadless areas that should be considered one roadless area and recommended it for permanent protection as wilderness. SEACC identified the Spires roadless area as part of the Port Houghton/Cape Fanshaw complex (RAs 201, 202, and 308), which should be considered one contiguous roadless area and should be recommended for permanent protection as wilderness. They indicated that if this complex were designated, it would create a contiguous wilderness along the central mainland coast of nearly 2 million acres, making it the second largest Forest Service wilderness in the nation.

A number of cave/karst experts and other individuals stated that the Spires Roadless Area contains approximately 2,800 acres of karst in unforested, alpine or icefield locations, which is unique for the Tongass and should be protected.

Some individuals felt that Spires was deserving of long-term protection. Some recommended it because of world-class scenery, abundant wildlife and habitat, and almost unilateral support for wilderness protection. Some individuals recommended protection for the area from Cape Fanshaw to Thomas Bay.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The roadless area is part of a region of several adjoining roadless areas and wilderness areas that extend along the mainland from the Misty Fiords National Monument Wilderness in the south to Glacier Bay National Park in the north. This extensive unroaded area borders other unroaded areas to the north and east in Canada. The roadless area adjoins the Fanshaw Roadless Area and the Tracy Arm-Fords Terror Wilderness on the north and the Stikine-LeConte Wilderness on the south. Land across the Canadian border to the east is mostly rugged mountains and glaciers. Use of the mainland areas can be very high, as is the case for the Juneau Icefield, where tourism accounts for a very high level of use. Other mainland areas receive light use inland with slightly higher use at lakes, or along saltwater shorelines.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 85 | 115 |
| Petersburg (Pop. 3,324) | 10 | 20 |
| Wrangell (Pop.2,308) | 25 | 50 |
| Ketchikan (Pop. 14,070) | 100 | 145 |

Petersburg is the nearest stop on the Alaska Marine Highway

**(4) Relative Contribution to the National Wilderness Preservation System:** The Spires Roadless Area is located on the mainland, from the Port Houghton drainage and Tracy Arm-Fords Terror Wilderness on the north to the Stikine-LeConte Wilderness on the south. It is adjacent to Frederick Sound on the southwest and to the Canadian border on the east. The Fanshaw and Windham-Port Houghton Roadless Areas border the area to the west. The area is generally characterized as highly complex terrain dominated by rugged mountains, many of which reach elevations of over 5,000 feet. The tallest is over 9,000 feet. Between the mountains are deep valleys and numerous glaciers. Near the shore, the landforms become gentler and include large outwash plains from Farragut, Muddy, and Patterson Rivers. These rivers are rather short (4 to 12 miles) and of glacial origin.

The area is natural appearing and mostly unmodified, except for southern portion where developments on adjacent lands influence the area to some degree. The natural integrity of the roadless area is outstanding, and the apparent naturalness is very high. The apparent naturalness is rated as outstanding if the southern area is separated from the main part of the roadless area. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding in the area.

The area has outstanding scenic quality; approximately 83 percent of the landscape is considered distinctive for the character type from a scenery standpoint. Near Patterson Glacier are the remains of a forest once buried during a glacial advance. The Patterson Glacier Geological and Botanical Special Interest Area provide an opportunity to study plant succession and other glacial-related features. There are numerous glaciers in this area, including Baird Glacier, Oasis Glacier, Witches Cauldron, Patterson Glacier and portions of LeConte Glacier. The area also has some areas of karst development.

The roadless area includes about 31,965 acres of high-volume, old-growth forest. Of these acres, 3,489 are mapped as high-volume, coarse-canopy old growth.

The Spires Roadless Area lies within the Ice Fields and Central Coast Range Biogeographic Provinces. Approximately 72 percent of the roadless area is within the Ice Fields province and makes up about 13 percent of that province. It is one of nine inventoried roadless areas found in the province that collectively make up about 67 percent of the province. Portions of the Tracy Arm-Fords Terror, Stikine-LeConte, and Misty Fiords National Monument Wilderness also lie within the Ice Fields Province and make up about 33 percent of the province. The remaining 28 percent of the Spires Roadless Area is located within the Central Coast Range Biogeographic Province and makes up about 21 percent of the province. It is one of nine inventoried roadless areas found in the province that collectively make up about 59 percent of the province. Portions of the Stikine-LeConte Wilderness also lie within the Central Coast Range province and make up about 38 percent of the province.

The Spires Roadless Area lies within two ecological sections; it represents 10 percent of the Boundary Ranges Ecological Section and 4 percent of the Inside Passage Fjordlands Ecological Section. Both of these ecological sections are well represented by existing wilderness (33 and 20 percent, respectively) and by other existing non-development LUDs (62 and 32 percent, including 1 and 2 percent in LUD II, respectively).

The majority (78 percent) of this roadless area is within the Boundary Ranges Icefields Ecological Subsection; this portion of the roadless area represents 10 percent of the entire ecological subsection. Approximately 32 percent of this ecological subsection is in existing wilderness, 1 percent is in existing LUD II, and 62 percent is protected by other existing non-development LUDs. The Holkham Bay Complex Ecological Subsection represents 12 percent of the roadless area; this portion of the roadless area represents 13 percent of the entire ecological subsection, which is well represented in existing wilderness (32 percent) and by other existing non-development LUDs (28 percent). Approximately 5 percent of the roadless area is in the Eastern Passage Complex Ecological Subsection; this portion of the roadless area represents 12 percent of the entire ecological subsection, which is well represented in existing

wilderness (23 percent), existing LUD II (3 percent), and other existing non-development LUDs (29 percent). The remaining 5 percent of this roadless area is split between the Thomas Bay Outwash Plains and the Cape Fanshaw Complex Ecological Subsections. The portions of the roadless area represented are 43 and 16 percent of the ecological subsections, respectively. Approximately 0.1 percent of the Cape Fanshaw Complex and none of the Thomas Bay Outwash Plains is in existing wilderness; however, 29 and 25 percent of these ecological subsections are represented in existing non-development LUDs, respectively.

The Spires 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 5$^{th}$ from the highest (along with six other roadless areas) among the 109 Tongass inventoried roadless areas. Another rating was done for the roadless area without Thomas Bay/Muddy and Paterson River in the southern portion of the area and it resulted in the higher rating of 27.

There is strong local and national support for managing the area in a roadless condition, and some support for designation of the area as wilderness. Designation would create a large wilderness that would connect the Chuck River, Tracy Arm-Fords Terror, and Stikine-LeConte Wilderness Areas. Designation of the area also would add Congressional protection to about 43 percent of the Thomas Bay Outwash Plains and 16 percent of the Cape Fanshaw Complex Ecological Subsections that have less than 1 percent 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 very high.

## V. Environmental Consequences

The Spires Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, or 5 is implemented. Approximately 91 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 9 percent, mostly within the immediate vicinity of where such activities are ongoing. The exception is east of Farragut Bay along the coastline where some suitable timber lands occur. The land in the development LUDs provides an estimated 6,833 acres that are suitable for timber production (4 percent of the suitable acres on the Petersburg Ranger District). Approximately 325 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains an estimated 175,756 acres of undiscovered locatable mineral resources; all of these acres are considered to have low potential for development. The high level of helicopter landings for tourism would continue and likely increase. Timber sale, recreation, minerals, and special uses programs would continue. The large undeveloped area that connects the Stikine-LeConte and Tracy Arm Fords Terror Wildernesses will mostly remain undeveloped. The very high scenic quality associated with the glaciers and mountain peaks, and the Patterson Glacier Botanical and Special Interest Area are protected by the Forest Plan.

Under Alternative 3, a 500,076-acre portion of the roadless area in Special Interest Area, Old-growth Habitat, Semi-remote Recreation, 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 and the potential for other uses and development, including recreation, minerals and some special uses, could be restricted within the Recommended Wilderness LUD area. Lands suitable for timber production in the roadless area would be reduced to approximately 4,784 acres. The high level of helicopter landings for tourism would likely be restricted or phased out, and not allowed if the area is designated wilderness. 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 also would add Congressional protection to a portion of the Thomas Bay Outwash Plains and the Cape Fanshaw Complex Ecological Subsections that have less than 1 percent in wilderness or LUD II. The values associated with the natural settings of the majority of the roadless area would be provided long-term protection if designated wilderness.

Under Alternative 4, a 482,864-acre portion of the area in Special Interest Area, Old-growth Habitat, Semi-remote Recreation, and Wild/Scenic/Recreation River 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. Lands suitable for timber production would not change from Alternative 1. The potential for other uses and development, including recreation, minerals and some special uses, could be restricted within the Recommended Wilderness LUD area. The high level of helicopter landings for tourism would likely be restricted or phased out, and not allowed if the area is designated wilderness. Mineral prospecting and development in the Recommended Wilderness LUD

would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area also would add Congressional protection to a portion of the Thomas Bay Outwash Plains and the Cape Fanshaw Complex Ecological Subsections that have less than 1 percent in wilderness or LUD II. The values associated with the natural settings of the majority of the roadless area would be provided long-term protection if designated wilderness.

Under Alternatives 6, 7, or 8, the entire area would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed and the potential for other uses and development, including recreation, minerals and some special uses, could be restricted. The high level of helicopter landings for tourism would likely be restricted or phased out, and not allowed if the area is designated wilderness. 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 also would add Congressional protection to about 43 percent of the Thomas Bay Outwash Plains Subsection and 16 percent of the Cape Fanshaw Complex Ecological Subsection that have less than 1 percent in wilderness or LUD II. 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 202 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | 500,076 | 482,864 | | 542,830 | 542,830 | 542,830 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | 13,760 | 13,760 | 1,490 | 1,490 | 13,760 | | | |
| Remote Recreation | | | | | | | | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | 8,124 | 8,124 | 7,702 | 7,640 | 8,124 | | | |
| Semi-remote Recreation | 456,925 | 456,925 | 47 | | 456,925 | | | |
| Recommended LUD II | | | | | | | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | 13,186 | 13,186 | | | 13,186 | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 19,235 | 19,235 | 11,484 | 19,235 | 19,235 | | | |
| Modified Landscape | 12,176 | 12,176 | 8,179 | 12,176 | 12,176 | | | |
| Timber Production | 19,424 | 19,424 | 13,851 | 19,424 | 19,424 | | | |
| **TOTAL** | **542,830** | **542,830** | **542,830** | **542,830** | **542,830** | **542,830** | **542,830** | **542,830** |
| Suitable Timber Lands | 6,833 | 6,833 | 4,784 | 6,833 | 6,833 | 0 | 0 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Thomas (203)

**ACRES (NFS):** 5,232

**BIOGEOGRAPHIC PROVINCE:** Central Coast Range

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 18

### I. Overview and Description:

**(1) Location and Access:** The area is located between Thomas Bay and Frederick Sound on the Point Agassiz Peninsula. The area is part of the coastal mainland. The area is accessed by boat and floatplane on saltwater within Thomas Bay. Anchorage is available in Thomas Bay. The shoreline along Frederick Sound is exposed and often difficult to access. There are no sites suitable for landing wheeled aircraft. There is road access from the southern end of Thomas Bay to the southern end of the roadless area. There is no ferry service or road access to the area from outside. The roadless area is approximately 10 air miles northeast of Petersburg, which is on the Alaska Marine Highway and has air service.

**(2) History:** The Thomas Bay area is in the traditional territory of the Stikine Tlingit. A variety of archaeological sites exist in the area, including prehistoric period villages, camps, petroglyphs, and culturally-modified trees. Historic period use is rather extensive, especially at Point Agassiz, where a homestead community was established during the first quarter of the twentieth century. The Gardner Shrimp Company cannery was established on Ruth Island in Thomas Bay in 1916. In 1958, logging began in the Muddy and Patterson River drainages southeast of the area. Mining activities have occurred in the Thomas Bay area.

**(3) Geography and Topography:** The area is generally characterized by gently rolling terrain with little relief. This area is peninsular and separates Frederick Sound from Thomas Bay. Though the roadless area is part of the mainland, its size, location and shape display few characteristics typical of the mainland. The terrain rises gradually from shoreline, to a height of about 400 feet near the center. Several small streams drain the area, and several small lakes lie near the center of the area. The area contains 11 miles of shoreline on saltwater with 2 acres of island. There are no acres mapped as rock, icefield, or alpine in this roadless area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Central Coast Range Biogeographic Province. The area is characterized by broad, low-lying valleys and several steeply rising peaks. Productive forest lands exist in river bottoms and on mountain slopes. Vegetation ranges from sub-alpine to saltwater marshes. This province is warmer than the northern coast range province and the topography is less precipitous. The Stikine River system is located south of the Thomas Roadless Area in the center of the province and has a major continental influence, providing a migration corridor for plant and animal species. There are no unique plant or soil associations in the roadless area.

Ecological Section/Subsection. The Thomas Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E). This areas is represented by the Thomas Bay Outwash Plains Ecological Subsection (see table below). This subsection is characterized by a relatively smooth landscape with occasional hills resulting from glacial erosion and deposition. The majority of the subsection is below 500 feet elevation and the predominantly mineral, productive soils support hemlock-spruce forests (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Thomas Bay Outwash Plains | 100% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock and glacial drift. In general, well-drained or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More poorly-drained soils developed on less sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

**(c) Vegetation:** Vegetation consists of typical spruce-hemlock forests. Muskegs are interspersed among low elevation timber stands where drainage is restricted. Approximately 158 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Spruce trees are also typically found as stringers along the streams.

There are approximately 4,841 acres mapped as forest land of which 2,024 acres (42 percent) are mapped as productive old-growth forest. Of the productive old growth, 406 acres (20 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 52 acres of high-volume, coarse-canopy old growth. There are about 102 acres of second growth along the shoreline from older beach logging.

**(d) Fish:** Important fish resources occur primarily outside the Thomas Roadless Area in and adjacent to the Spires Roadless Area. These include 13 Alaska Department of Fish and Game (ADF&G) numbered salmon-producing streams present within the area. The Farragut River, the Muddy River and Dry Bay Creek are the best salmon producers. There are runs of pink, chum, coho, sockeye, and chinook salmon, as well as steelhead, rainbow, and cutthroat trout, and Dolly Varden char in the Farragut River (ADF&G, 2000). Marine and intertidal waters support significant populations of Tanner crab, Dungeness crab, king crab, and various species of shrimp and clams.

**(e) Wildlife:** Black bears, wolves, and Sitka black-tailed deer are found in the area, as well as an occasional brown bear and a moderate population of moose. The mountain lion is not known to be in this area, but is present in small numbers on the mainland. It is probably migrating into Southeast Alaska from Canada using the large rivers, such as the Stikine River, as corridors.

Furbearers and other small mammals include mink, river otters, beaver, marten, ermine, lynx, red squirrel, northern flying squirrel, porcupine, mice, shrew and voles. There are occasional sightings of fisher and wolverine, but they are at the edge of their range and are considered an incidental species. Bats are present during the summer months and occasionally overwinter in man-made structures.

Bald eagles, northern goshawks, merlin, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, and pigmy owls are found in this area. Numerous ducks, geese, sandhill cranes, trumpeter swans, marbled murrelets, and great blue herons occur on the mainland both during migration and, in some cases, nesting. Spruce grouse, blue grouse and ptarmigan are known to occur on the mainland.

Small forest-dwelling birds that are known to occur on the mainland include the red-throated, Pacific and common loon, and several plover, yellowlegs, and sandpiper species. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species and five swallow species are also known on the mainland. Steller's jay, black-billed magpie, northwestern crow, and common raven occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush and hermit thrush occur. The American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur.

Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Several amphibians are known to occur on the mainland. They are rough-skinned newts, western toad, and spotted frog. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests and in clearcuts. Spotted frogs are found primarily in lacustrine, palustrine ecosystems and normally found in large river systems like the Stikine River.

Sea mammals known to inhabit the waters surrounding the mainland are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal.

**(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 Scenic Viewshed and Old-growth Habitat.

| LUD | Acres |
|---|---|
| Scenic Viewshed | 3,854 |
| Old-growth Habitat | 1,378 |

The majority of the roadless area, approximately 74 percent, was allocated to one development LUD, Scenic Viewshed. The Scenic Viewshed LUD area is located along most of the peninsula and as viewed from Frederick Sound and in Thomas Bay.

The remaining 26 percent of the roadless area was allocated to a non-development LUD, Old-growth Habitat. This LUD is located along the western coast of the peninsula.

Recreation uses in the vicinity of the area include moose, deer, black bear, and waterfowl hunting; coho salmon, pink salmon, steelhead, and trout fishing; sea kayaking; boating; camping; hiking; beachcombing; sightseeing; flightseeing; tour boat use, and recreation cabin use. Thomas and Farragut Bays are frequently used by recreational boaters and commercial fishing boats. There are no commercial overnight facilities in the area. Current information indicates that some subsistence activities occur, primarily from residents of Petersburg.

The Crystal Creek Timber Sale, part of which is currently under contract, will extend the existing road system into the roadless area. The log transfer facility, most of the road construction, and the timber harvest units are currently under contract. Other timber sales are planned according to the Crystal Creek Timber Harvest FEIS (USDA Forest Service, 1998). Additional timber harvest projects in this area are on the 10-year timber sale schedule.

**(6) Appearance (Apparent Naturalness):** Most of the area appears unmodified. However, the timber management developments around Thomas Bay and in the Muddy and Patterson River valleys give the area a somewhat modified appearance.

**(7) Surroundings (External Influences):** The roadless area is located on a peninsula that has been separated from the mainland by developments on lands to the south and which forms the southern entrance to Thomas Bay. Thomas Bay is a popular recreation destination for residents of Petersburg. Relatively heavy boat traffic can occur at times. Frederick Sound is a major passage for commercial boat traffic, including Alaska State ferries. Evidence of beach logging, and adjacent and distant timber management developments is visible from parts of this roadless area. Inhabited and abandoned buildings on the private land nearby may be visible from some places in the roadless area. Jet aircraft approaching and leaving Petersburg may occasionally pass over portions of the area at elevations of less than 10,000 feet. Small aircraft frequently pass by the area.

**(8) Attractions and Features of Special Interest:** Thomas Bay is a destination attraction for residents of Petersburg. This roadless area makes up a substantial portion of the southern entrance to the Bay. The area contains two inventoried recreation places that cover 158 acres, or 3 percent of the roadless area. There are no trails or public recreation cabins in the area. The presence of good anchorage sites allows boaters to stay near the area overnight.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The Thomas Roadless Area was included in the 1997 Forest Plan Revision in the less than 5,000-acre category. Updated mapping indicates that it is more than 5,000 acres, and since it is on a peninsula and could be managed as a separate entity, it has been included as an inventoried roadless area for the 2003 analysis. Some areas along the shore that have been beach logged but not roaded have also been added to the roadless area. Small adjustments have been made to the boundary along the developed areas between the Draft and Final SEIS to improve manageability in those areas.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** Nearly all of the roadless area is unmodified and natural appearing. The exceptions are the areas adjacent to the southern end of the roadless area where timber management-related developments have occurred and private lands are located. The area has high natural integrity and apparent naturalness. However, the relatively small size of the area coupled with the adjacent developments, make it marginally suitable for wilderness management.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a low opportunity for solitude and a low opportunity for primitive recreation within the area. This is reflective of the relatively small size of the area and its ability to absorb nearby activities and associated effects. At times, low-flying airplanes or helicopters may disrupt visitors for brief periods. Passing boats going to Thomas Bay may also disrupt visitors for brief periods. Present recreation use levels are low within the area but higher in nearby areas. Generally, a person camped inland is unlikely to see others.

Accessing the roadless area by boat from the community of Petersburg requires a 1- to 2-hour crossing on exposed waters. The western coast of the area is more difficult to access while the area is much more easily accessed from Thomas Bay. The road system to the south allows relatively easy access to the area. The relatively small size with relatively easy access reduces this area's opportunity for self-reliance, adventure, and challenging experiences.

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) | 3,238 | 62% |
| Semi-Primitive Motorized (SPM) | 1,072 | 20% |
| Roaded Modified (RM) | 922 | 18% |

The area contains two inventoried recreation places that cover 158 acres, or 3 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| SPNM | 0 | 0 |
| SPM | 1 | 156 |
| RM | 1 | 2 |

There are four public recreation cabins, two maintained trails, and two abandoned trails.

**(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 Thomas

Roadless Area was not given a rating because of its relatively small size and marginal eligibility for wilderness. The Thomas Roadless Area was evaluated in 2003 and given a rating of 18.

**(4) Ecologic and Geologic Values:**

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment rated VCU 489, at the entrance to Thomas Bay as primary salmon producers. The VCU was not listed as primary producers of sportfish (ADF&G, 1998).

Marine and intertidal areas support high commercial, personal use, and recreational fisheries for Tanner, Dungeness, and king crab, and various species of shrimp and other shellfish.

**(b) Wildlife Resources:** Black bears, Sitka black-tailed deer, and a relatively high density of wolves are found in the general area. Waterfowl use the extensive grassflats in smaller areas around Thomas Bay, and nesting Canada geese are common near Thomas Bay. There are several northern goshawk nesting sites in the general area. The humpback whale and the Steller sea lion use the marine waters adjacent to the roadless area, although there are no sea lion haulout sites or other concentrations of marine wildlife in the vicinity of this roadless 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 or near 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. Ospreys have nested at Thomas Bay and have been seen at Swan Lake. 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. Several goshawk nests have been found in the general area. In addition, twelve sensitive plant species are known or suspected to occur in the Petersburg Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are no known significant or unique karst, cave or other geologic resources within the Thomas Roadless area.

**(5) Scientific and Educational Values:** The area has not been identified as a Research Natural Area, or as having high scientific or educational values.

**(6) Scenic Values:** The area exists in a mostly unmodified visual condition. Some of the foreground along Frederick Sound and as one enters Thomas Bay includes much of the roadless area, which is visible from current ferry and small cruise ship routes.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Frederick Sound, a part of the Alaska Marine Highway, a tour ship route and a saltwater use area; Thomas Bay, saltwater use area; Thomas Bay, used as a boat anchorage.

About 23 percent of the area is inventoried in Variety Class B (possessing landscape diversity that is common for the character type), and the remaining 75 percent is inventoried as Class C (possessing a low degree of landscape diversity) and 2 percent is not inventoried.

The majority of this roadless area (52 percent) is in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. EVC II makes up about 9 percent of the area, where changes to the landscape are not noticed by the average person unless pointed out. Another 5 percent of the area is in EVC IV in which changes to the landscape are easily noticed by the average person and may attract some attention. Another 32 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. Two percent of the area has not been inventoried.

**(7) Social, Cultural, and Historical Values:** The Thomas Bay area is in the traditional territory of the Stikine Tlingit. A variety of archaeological sites exist in the general area, including prehistoric period villages, camps, petroglyphs, and culturally-modified trees and historic period cabins and trails. Historic period use is rather extensive, especially at Point Agassiz, where a homestead community was established during the first quarter of the 20th century. The Gardner Shrimp Company cannery was established on Ruth Island in Thomas Bay in 1916. In 1958, logging began in the Muddy and Patterson River drainages southeast of the area. Mining activities have occurred in the Thomas Bay area. The Point Agassiz settlement was established during the first quarter of the 20th century. A schoolhouse was built in 1920 and remains there today. Several private cabins and homes are still located on private land adjacent to the roadless area. Thomas Bay is a destination attraction for residents of Petersburg. VCU 489, on the southern shore of Thomas Bay, is among the VCUs listed as highest sensitivity to disturbance of subsistence use areas. VCU 489, along Frederick Sound up to the entrance to Thomas Bay, was also listed among the VCUs in the second most important group for community use values. VCU 489 was not listed in the most important group (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** The majority of the boundary is defined by saltwater. Areas developed for timber management and private land generally define portions of the eastern and southern boundaries. Feasibility of management in a wilderness condition is low, primarily due to the relatively small size of the area in conjunction with adjacent uses and activities.

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

**(1) Recreation, Including Tourism Potential:** The icefields to the east of the area have growth potential for floatplane flightseeing and helicopter tours. Tourism has been increasing in Southeast Alaska and is expected to continue to increase. Petersburg is a hub for this increase in tourism and is expected to continue. The proximity of the roadless area to Petersburg is likely to result in an increase in tourist interest in or near the roadless area. There is high potential for additional outfitter/guide permits and for additional trails, cabins, or shelters. The beauty, diversity, and accessibility of Thomas Bay make it a promising area for increased sightseeing and excursion trip opportunities.

In 1996, the Alaska Visitor Association (AVA) proposed a recreation development for Thomas Bay, which included a leased proprietary camp with a capacity of 15 tent platforms.

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

**(3) Fish Resources:** No fish enhancement projects are currently being considered in the roadless area.

**(4) Wildlife Resources:** No wildlife enhancement projects are currently being considered in the roadless area.

**(5) Timber Resources:** There are approximately 2,024 acres inventoried as productive old-growth forest in the roadless area. Second growth associated with older beach logging is mapped as 102 acres. Of these acres, approximately 1,733 acres of the area 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), 480 acres (9 percent) of this roadless area are estimated to be suitable for timber production. Approximately 90 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 this roadless area is closely linked to the existing road system immediately south and east of the area. The Crystal Creek Timber Sale is currently under contract to extend 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. There are no known epidemic disease occurrences.

**(7) Minerals:** There has been some mineral exploration in the past outside the area. There are no known mining claims within the area.

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

**(9) Water Availability and Use:** There are no existing or planned hydroelectric or domestic water projects in the Thomas Roadless Area.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas.

**(11) Land Use Authorizations:** No special use permits have been issued within the area. Nearby in the Spires Roadless Area, Forest Service records show that 11 outfitter/guides used this area in 2000 for 3 service days for freshwater fishing, 313 service days for remote setting nature tours, 17 service days for black bear hunting, 31 service days for mountain goat hunting, and 727 service days for helicopter landing tours.

**(12) Land Status:** The entire area is National Forest System land. There is state and private land adjacent to the roadless area.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Local Petersburg residents have a high degree of interest in how this area is managed. There was a strong protest when the State of Alaska considered subdividing and selling land in Thomas Bay.

**(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 Thomas Roadless Area. In 2001, HR 2908 proposed that the area be designated as part of the Thomas Bay-Twin Peaks Wilderness.

**(c) Public Input During Forest Plan Revision and Appeals:** The AVA proposed a recreation development for Thomas Bay, which included a lease proprietary camp with a capacity of 15 tent platforms. The Narrows Conservation Coalition and the Juneau Sierra Club mentioned the importance of the area for fishing, recreation, and subsistence. They also commented on the importance of protecting recreation and commercial anchorage, whale watching, tourism, and crab habitat. Some commenters stressed that the area was visible from cruise ships and should not have visible timber harvest. The timber industry wanted the area managed for 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:** Comments were received on the Crystal Creek Timber Harvest Project DEIS (USDA Forest Service, 1997). Thirteen persons, agencies, and organizations commented. None of the comments dealt with wilderness or roadless area issues.

**(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 Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 201, 202, 203, and 308 as a contiguous complex of roadless areas that should be considered

one roadless area and recommended it for permanent protection as wilderness. SEACC included this area in their comments on the Cape Fanshaw/Port Houghton area.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Thomas Roadless Area is located about 5 miles from the Spires Roadless Area and is separated from it by an area developed primarily for timber management. The Stikine-LeConte Wilderness is located about 15 miles to the southeast, the Tracy Arm-Fords Terror and Chuck River Wildernesses about 35 miles to the north, and the Petersburg Creek-Duncan Canal Wilderness about 20 miles to the southwest.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 105 | 115 |
| Petersburg (Pop. 3,224) | 10 | 15 |
| Wrangell (Pop. 2,308) | 40 | 50 |
| Ketchikan (Pop. 14,070) | 125 | 140 |

Petersburg is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Thomas Roadless Area is located on the mainland on a peninsula that includes Point Agassiz and forms the southern entrance into Thomas Bay from Frederick Sound. The area is generally characterized by gently rolling terrain with little relief and elevations up to 400 feet.

The area is mostly natural appearing, but it is influenced by developments and activities in adjacent lands. The area has very high natural integrity and apparent naturalness. The opportunity for solitude and primitive recreation is low.

The area has relatively high cultural and historic values. There are no other known significant or unique wilderness attributes for this area. None of the landscape in the area is considered distinctive for the character type from a scenery standpoint.

The roadless area includes about 406 acres of high-volume, old-growth forest. Of these acres, 52 are mapped as high-volume, coarse-canopy old growth.

The Thomas Roadless Area lies within the Central Coast Range Biogeographic Province and makes up approximately 1 percent of the province. It is one of nine inventoried roadless areas found in the province that collectively make up about 59 percent of the province. Portions of the Stikine-LeConte Wilderness lie within the Central Coast Range Province and make up about 38 percent of the province.

The Thomas Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents 0.3 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 an additional 30 percent is protected by other existing non-development LUDs.

The Thomas Roadless Area also lies completely within the Thomas Bay Outwash Plains Ecological Subsection and represents 17 percent of the entire ecological subsection. None of this ecological subsection is located in existing wilderness, but 25 percent is protected by other existing non-development LUDs.

The Thomas 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 84$^{th}$ from the highest (along with eight other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for managing the area in an unroaded condition, and some support for designating the area as wilderness. Designation would create a wilderness that is very small and heavily influenced

by developments and activities on adjacent lands. The area also includes portions of a timber sale under contract in the southeast portion of the roadless area. Designation of the area as wilderness would add Congressional protection to approximately 17 percent of the Thomas Bay Outwash Plains Ecological Subsection that 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 very low.

## V. Environmental Consequences

The Thomas Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 is implemented. Approximately 26 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 74 percent. The land in the development LUDs provides an estimated 480 acres that are suitable for timber production (less than 1 percent of the suitable acres on the Petersburg Ranger District). Approximately 14 of the suitable acres are classified as high-volume, coarse-canopy old growth. The timber sales, recreation, and special use programs would continue. The values associated with the natural settings of the roadless area could be affected by ongoing development allowed by the Forest Plan. The cultural and historic values of the area are protected under the Forest Plan under all alternatives.

Under Alternative 6, 7, or 8, the entire roadless area would be converted to Recommended Wilderness. Timber harvest would not be allowed and the ongoing recreation, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area as wilderness would add Congressional protection to approximately 17 percent of the Thomas Bay Outwash Plains Ecological Subsection that is not currently represented in wilderness or LUD II. 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 203 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | 5,232 | 5,232 | 5,232 |
| 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 | 1,378 | 1,378 | 1,378 | 1,378 | 1,378 | | | |
| Semi-remote Recreation | | | | | | | | |
| Recommended LUD II | | | | | | | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 3,854 | 3,854 | 3,854 | 3,854 | 3,854 | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | | | | | | | | |
| **TOTAL** | **5,232** | **5,232** | **5,232** | **5,232** | **5,232** | **5,232** | **5,232** | **5,232** |
| **Suitable Timber Lands** | 480 | 480 | 480 | 480 | 480 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Madan (204)

**ACRES (NFS):** 69,126

**BIOGEOGRAPHIC PROVINCE:** Central Coast Range

**ECOLOGICAL SECTION:** Inside Passage Fjordlands and Boundary Ranges

**2003 WILDERNESS ATTRIBUTE RATING:** 25

### I. Overview and Description

**(1) Location and Access:** The area is located on the mainland less than 5 miles east of Wrangell and is bounded on the north by the Stikine-LeConte Wilderness; on the west by the Eastern Passage and an area of state-owned land; on the south by Blake Channel; and on the east by the Aaron Creek divide and Roadless Area 205. Accessible saltwater shorelines suitable for landing small craft and floatplanes are abundant when weather conditions are favorable. The shoreline along Eastern Passage is relatively protected. Floatplanes are also able to land on Virginia Lake. Access to other areas in the interior is by foot or helicopter. There are no sites suitable for landing wheeled aircraft; however, the Wrangell airport, located on Wrangell Island, is within 1 mile of the area. There is no ferry service or road access to the area from outside. The Mill Creek Trail, located on state-owned land, provides access to the outlet of Virginia Lake.

**(2) History:** The area was inhabited by the Tlingit in prehistoric times. A sawmill and a stampmill operated at the mouth of Mill Creek during the early 1900s. Goldschmidt and Haas (1946) identified the mouth of Mill Creek as the site of a former village. They also identified two camps and former villages further north, in proximity to the area's north boundary. Extensive prospecting has occurred in the area over the years, resulting in numerous claims and the patent of one group of claims. Several active and inactive mines are located in the Porterfield Creek and Glacier Creek drainages (USDA Forest Service, 2000). At least two of the potential road routes to Canada, which have been discussed in the past, pass through this area. These potential roads were not, however, included in the March 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999). A small area at the mouth of Moose Creek has been logged in the past.

**(3) Geography and Topography:** The area is generally characterized as highly-complex terrain dominated by rugged mountains, many of which reach elevations of over 3,000 feet. The tallest is over 5,000 feet. Between the mountains are deep, broad valleys containing several sizable streams. Near the shore, the landforms become more gentle. Dominant waterforms include a relatively small glacier that occupies the highest mountains, Virginia Lake, and the waterfall on Mill Creek. Freshwater lakes account for a approximately 44 acres, with another 333 acres in ice and snow, and 6,365 acres in rock. Alpine accounts for about 4,064 acres. The area contains 29 miles of saltwater shoreline and 162 acres of small islands.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Central Coast Range Biogeographic Province. This region is generally characterized as a core of massive, angular mountains capped with ice fields at high elevations along the Canadian border, with somewhat lower mountains, deeply-incised valleys, and glacier-fed streams closer to the coast. This roadless area is more characteristic of the lower coastal portion of the region. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The Madan Roadless Area is contained mostly within the Inside Passage Fjordlands Ecological Section (M247E) and also contains portions within the Boundary Ranges Ecological Section (M246B). These areas are represented by four ecological subsections (see table below). The

Eastern Passage Complex Ecological Subsection represents the majority, approximately 82 percent, of the Madan Roadless Area. Lying west of the Coast Range megalignment, the underlying geology of this subsection is rugged sedimentary and volcanic formations, dissected by numerous streams, extending from Bradfield Canal to Thomas Bay. Mineral soils, of sedimentary and plutonic origin predominate, with organic soils relatively common on poorly drained sites. Productive hemlock and hemlock-spruce forests cover the majority of the subsection with the remainder in alpine vegetation. The Bell Island Granitics Ecological Subsection is the other significant complex within the Madan Roadless Area covering 18 percent of the roadless area. It is characterized by rounded hills and narrow, glacially scoured valleys. 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 | Eastern Passage Complex | 82% |
| | Bell Island Granitics | 17% |
| | Zimovia Strait Complex | <1% |
| Boundary Ranges | Boundary Ranges Icefields | 1% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby, forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Alpine vegetation (mapped as 4,064 acres) dominates above an elevation of 2,500 feet. Below that elevation the mountains, hills, and well-drained outwash plains are dominated by heavy stands of western hemlock, Sitka spruce, Alaska-cedar, and scattered stands of redcedar. Much of the low-lying, poorly-drained land is covered with muskeg and scrub lodgepole pine. 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. Spruce is also typically found as stringers along the streams.

There are approximately 50,748 acres mapped as forest land, of which 33,372 acres (66 percent) are mapped as productive old-growth forest. A small area of second growth exists at the mouth of Moose Creek. Of the productive old growth, 15,719 acres (47 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 2,628 acres of high-volume, coarse-canopy old growth. There are about36 acres mapped as second growth resulting from past beach harvest activities.

**(d) Fish:** Seven Alaska Department of Fish and Game-numbered fish streams are present in the area including Crittenden, Porterfield, and Glacier creeks. Stretches of each of these creeks are classified as Class I streams. Fish species in the area include coho, sockeye, and pink salmon, cutthroat trout, and Dolly Varden char (USDA Forest Service, 2000). Salmon production from the area is generally low. Virginia Lake is recognized as providing one of the top recreational cutthroat trout fisheries in Alaska.

**(e) Wildlife:** A small population of mountain goats lives in the area. Black bear and Sitka black-tailed deer are found in the area, as are brown bear and a small population of moose. Marten are expected to occur throughout the lower elevations in the area and a den was found during fieldwork in the Virginia Lake area in 1998. At least 19 bald eagle nests have been documented along the shoreline of the area.

Wolf sign was found during field surveys in the area in 1997 and 1998 (USDA Forest Service, 2000). There are no known concentrations of marine wildlife or sea lion haul-out sites.

**(5) Management Direction and Current Uses:** The area was allocated to seven Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These seven LUDS are Scenic Viewshed, Timber Production, Modified Landscape, Minerals, Old-growth Habitat, Wild River, and Semi-remote Recreation. The Minerals LUD is a secondary LUD that overlays the other land uses.

| LUD | Acres |
|---|---|
| Scenic Viewshed | 22,687 |
| Timber Production | 19,260 |
| Modified Landscape | 18,505 |
| Minerals* | 5,247* |
| Old-growth Habitat | 5,874 |
| Wild River | 2,602 |
| Semi-remote Recreation | 198 |

* Note that acres in the Minerals LUD are also included in other LUD areas.

Approximately 88 percent of the roadless area (not including the Minerals LUD overlay) was allocated to a development LUD (Scenic Viewshed, Timber Production, Modified Landscape). The Scenic Viewshed LUD was assigned to approximately 33 percent of the roadless area. Approximately 28 percent of the area was allocated to the Timber Production LUD. The Modified Landscape LUD was assigned to approximately 27 percent of the roadless area. A narrow strip along the east edge of the area is allocated to the Minerals LUD overlay, which covers approximately 8 percent of the roadless area.

Approximately 12 percent of the roadless area was allocated to a non-development LUD (Old-growth Habitat, Wild River, Semi-remote Recreation). The Old-growth Habitat LUD was assigned to approximately 8 percent of the roadless area. The Wild River LUD, which encompasses approximately 9 river miles of the Virginia Lake and Creek system, was assigned to approximately 4 percent of the roadless area. Less than 1 percent of the roadless area was allocated to the Semi-remote Recreation LUD.

The preferred alternative of the proposed Madan Timber Sale DEIS, located in this area, encompasses 1,719 acres of harvest and 8.4 miles of permanent road construction in the Moose Creek drainage and along the west side of the area, south of Virginia Lake and Mill Creek. It also proposes to expand two of the Old-Growth Reserves in the area. The Tongass National Forest 10-year action plan schedules this sale for 2003. In addition, it schedules a timber sale to the north of Virginia Lake and Mill Creek called the Crittenden timber sale in 2007 and 2011.

The waters offshore are frequently used by small pleasure and commercial fishing boats. There are two public recreation cabins in the area. One is on the shore of Virginia Lake. The other is located on saltwater near Garnet Mountain just south of the Stikine-LeConte Wilderness. Both receive moderate use. With the exception of these facilities, recreation use is generally dispersed, with most use occurring along the shoreline. The Mill Creek Trail (0.9 miles), located just outside the project boundary, provides some access within the area. There are no commercial overnight facilities in the area. Wrangell residents are the primary contemporary subsistence users of the area. Petersburg residents also harvest subsistence fish resources in the area. The area is not, however, heavily used for subsistence harvest activities (USDA Forest Service, 2000).

The Virginia Lake sockeye fishery was enhanced in 1986. Subsequent fishery enhancement projects included construction of a combination steppass and pool-and-weir fishway in 1988 to increase fish passage into Virginia Lake. Sockeye fry are released annually and the lake is fertilized as part of an enrichment program (USDA Forest Service, 2000).

**(6) Appearance (Apparent Naturalness):** Overall, the area has high scenic quality with a natural appearing landscape. The two public recreation cabins and the small area of second growth that exists at the mouth of Moose Creek have little effect on the area's overall natural appearance. The area is most commonly viewed by people in boats from the Eastern Passage, several areas on Wrangell Island, Virginia Lake, and by people flying to Virginia

Lake. The area can also be viewed from boats passing through the Narrows and from the northern portion of Blake Channel. In addition, jet aircraft fly over the area in their approach to the Wrangell Airport.

**(7) Surroundings (External Influences):** This roadless area is part of a large unroaded area that stretches from the Misty Fiords National Monument south of the area, to the Skagway Juneau Icefield Roadless Area near Juneau. The area abuts the Stikine-LeConte Wilderness on the north and the Aaron Creek Roadless Area on the east. Moderately-heavy boat traffic passes offshore along this area in Eastern Passage. Jet and other aircraft approaching Wrangell may pass over portions of the area at elevations of less than 10,000 feet, and may be heard from the area as they land and take off. Other sights and sounds from Wrangell may also be detectable. Evidence of timber harvest on Wrangell Island is visible from some parts of the roadless area. The State has not yet indicated what it intends to do with its lands in the area. If a road to Canada were constructed, the State lands on the edge of the roadless area would likely be used for a deep-water port and community development. This road was not, however, included in the March 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999). It is included as a route for consideration by Southeast Conference in their ongoing assessment of long-term transportation needs for Southeast Alaska.

**(8) Attractions and Features of Special Interest:** Virginia Lake is the major recreation feature of the area, attracting people by floatplane and on the Virginia Lake Trail from saltwater. The area contains nine inventoried recreation places that cover 1,158 acres, or 2 percent of the roadless area. The public recreation cabins, the offshore saltwater fishing, the scenery provided by the mainland setting, the opportunity to hunt moose and brown bear, and the Mill Creek Trail are special features found in this roadless area. Virginia Lake is recognized as providing one of the top cutthroat trout recreational fisheries in southeast Alaska.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The boundaries of the roadless area have changed slightly since 1989 to encompass the peninsula area on the west side of Madan Bay. In addition, the boundaries of the State-owned area on the shoreline have expanded to include some lands that were previously part of the roadless area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is essentially unmodified, except for minor effects from mining, fisheries enhancements, limited timber harvesting, and the public recreation cabin sites. Approximately 99 percent of the area is natural appearing, where only ecological and geological change has occurred. Overall, this predominantly natural area is suitable for wilderness classification.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and primitive recreation within the area. Low-flying aircraft (floatplanes and jet aircraft) may disrupt visitors for brief periods. Boats bypassing the area are generally far enough offshore so as not to cause any distraction. Present recreation use levels are low except in the immediate vicinity of the two public recreation cabins that are located in the area, on the Virginia Lake Trail, and along the saltwater shore. Generally, a person camped inland is unlikely to see others. Three outfitter/guides reported using the area in 2000 for a total of 105 service days.

The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the community of Wrangell in less than 1 hour on somewhat protected waters. Access to Virginia Lake and the surrounding area is provided by the Mill Creek Trail and floatplanes.

Travel within the area can be moderately challenging, requiring moderate to high woods skills and experience. The presence of both black and brown bears presents a degree of challenge and 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) | 47,438 | 69% |
| Semi-Primitive Non-Motorized (SPNM) | 8,581 | 12% |
| Semi-Primitive Motorized (SPM) | 10,873 | 16% |
| Roaded Natural (RN) | 2,234 | 3% |

The area contains nine inventoried recreation places that cover 1,158 acres, or 2 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPNM | 2 | 5 |
| SPM | 5 | 1,095 |
| RN | 2 | 58 |

Virginia Lake is the major recreation feature of the area, attracting people by floatplane and on the Virginia Lake Trail from saltwater. The public recreation cabin on Virginia Lake and the one on saltwater near Garnet Mountain, just south of the Stikine-LeConte Wilderness, receive moderate use. The upper Virginia Lake area near the cabin is a popular moose hunting area. Virginia Lake is recognized as providing one of the top recreational cutthroat trout fisheries in Alaska.

**(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 Madan Roadless Area was given a rating of 24 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 25. The increase in ratings is reflective of the relatively large size and naturalness of the area.

**(4) Ecologic and Geologic Values:** The majority of the area is forested with stands of higher and lower volume old growth concentrated on the lower elevation areas on the west side of the roadless area.

**(a) Fish Resources:** Seven Alaska Department of Fish and Game-numbered fish streams are present in the area including Crittenden, Porterfield, and Glacier creeks. Stretches of each of these creeks are classified as Class I streams. Fish species in the area include coho, sockeye, and pink salmon, cutthroat trout, and Dolly Varden char (USDA Forest Service, 2000). Salmon production from the area is generally low. Virginia Lake is recognized as providing one of the top recreational cutthroat trout fisheries in Alaska.

VCU 502 along the Eastern Passage was listed as a primary sport fish producer and none of the VCUs was listed as primary salmon producers (ADF&G, 1998).

**(b) Wildlife Resources:** A small population of mountain goats lives in the area. Black bear and Sitka black-tailed deer are found in the area, as are brown bear and a small population of moose. Marten are expected to occur throughout the lower elevations in the area and a den was found during fieldwork in the Virginia Lake area in 1998. At least 19 bald eagle nests have been documented along the shoreline of the area. Wolf sign was found during field surveys in the area in 1997 and 1998 (USDA Forest Service, 2000). There are no known concentrations of marine wildlife or sea lion haul-out sites.

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 Queen Charlotte goshawk. In addition, twelve sensitive plant species are known or suspected to occur in the Wrangell Ranger District.

Three small Old-growth Habitat Reserves are located in the area. These reserves provide some connectivity or linkages to other reserves or old-growth protection LUDs (USDA Forest Service, 2000). The size and locations of two of these reserves would be adjusted as part of the proposed Madan Timber Sale.

**(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, eight sensitive plant species are known or suspected to occur in the Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** Approximately 969 acres, or 1.4 percent of the area, have been mapped as karst resources. Most of those acres, 760 acres, have been classified as high vulnerability karst. This karst is unique in part because of its rarity in the mainland area of Southeast Alaska. Significant paleontological remains have been found in one of the caves in the area and a plant species new to the Wrangell District was found growing on a marble outcrop below a large sink hole (USDA Forest Service, 2000).

**(5) Scientific and Educational Values:** There are opportunities to observe and study petroglyphs on the beach near Mill Creek and to watch returning salmon work their way upstream through the fishpass at Mill Creek Falls. The area is relatively accessible to schoolchildren from Wrangell, which is located less than 1 hour to the west. The karst resources of the area have been identified as relatively unique, in part because of its rarity in the mainland area. Significant paleontological remains have been found in one of the caves in the area and a plant species new to the Wrangell District was found growing on a marble outcrop below a large sink hole (USDA Forest Service, 2000).

**(6) Scenic Values:** Overall, the area has high scenic quality with a natural appearing landscape. The two public recreation cabins and the small area of second growth that exists at the mouth of Moose Creek have little effect on the area's overall natural appearance. Portions of the area are most commonly viewed by people in boats from the Eastern Passage, several areas on Wrangell Island, Virginia Lake, and by people flying to Virginia Lake. The area can also be viewed from boats passing through the Narrows and from the northern portion of Blake Channel. Jet aircraft fly over the area in their approach to the Wrangell Airport.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Eastern Passage and Blake Channel (Alaska Marine Highway and Tour Ship Routes), Virginia Lake (Dispersed Recreation Area), Virginia Lake and Creek (Recommended Recreational River), Virginia Lake and Garnet Ledge (Forest Service Cabins), Wrangell (Community), Road # 6265 on Wrangell Island (Public Use Road), Earl West Cove (Saltwater Use Area), Earl West Picnic Area (Developed Recreation Site), and Mill Creek Trail #515 (Hiking Trail).

About 7 percent of this roadless area is inventoried in Variety Class A (possessing landscape diversity that is unique for the character type). Much of the area, 53 percent, is inventoried in Variety Class B (possessing landscape diversity that is common for the character type) and the remaining 40 percent is inventoried as Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, 95 percent, is inventoried in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. However, the recreation cabin and the remnants of past mining activities are

evident from the Mill Creek Trail. Therefore, the remaining 4 percent of the area is in EVC III, where changes in the landscape are noticed by the average person, but they do not dominate the landscape.

**(7) Social, Cultural, and Historical Values:** The area was inhabited by the Tlingit in prehistoric times. A sawmill and a stampmill operated at the mouth of Mill Creek during the early 1900s. Goldschmidt and Haas' (1946) mapping identified the mouth of Mill Creek as the site of a former village. They also identified two camps and former villages further north, in proximity to the area's north boundary. Extensive prospecting has occurred in the area over the years, resulting in numerous claims and the patent of one group of claims. Several active and inactive mines are located in the Porterfield Creek and Glacier Creek drainages (USDA Forest Service, 2000). The area is accessible by boat from the community of Wrangell in less than 1 hour on somewhat protected waters.

The waters offshore are frequently used by small pleasure and commercial fishing boats. There are two public recreation cabins in the area, one on the shore of Virginia Lake, and one at saltwater near Garnet Mountain just south of the Stikine-LeConte Wilderness. Both receive moderate use. Virginia Lake is recognized as providing one of the top recreational cutthroat trout fisheries in Alaska. With the exception of these facilities and locations, recreation use in the area is generally dispersed with most use occurring along the shoreline. Three outfitter/guides reported using the area in 2000 for a total of 105 service days. The Mill Creek Trail (0.9 mile), located just outside the project boundary, provides some access within the area.

Wrangell residents are the primary contemporary subsistence users of the area. Petersburg residents also harvest subsistence fish resources in the area. The area is not, however, heavily used for subsistence harvest activities (USDA Forest Service, 2000). One of the VCUs in this area, VCU 502 along the Eastern Passage, was included among the VCUs with the highest community use value (ADF&G, 1998). This VCU includes a locally important subsistence sockeye fishery located at the mouth of Mill Creek, west of the roadless area on state lands (USDA Forest Service, 2000). None of the VCUs was listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** The area is well defined on the southwest by saltwater. The topographic divides are, for the most part, well defined. Feasibility of management as wilderness or in a roadless condition is high unless the mining claims are developed or the State develops roads and harvests timber or establishes a community on the State land.

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

**(1) Recreation, Including Tourism Potential:** There is potential for additional outfitter and guide permits and for additional trails, cabins, or shelters.

**(2) Subsistence Uses:** The existing patterns of subsistence use in the area would not be affected by wilderness designation, or management in an unroaded condition.

**(3) Fish Resources:** The Virginia Lake sockeye fishery was enhanced in 1986. Subsequent fishery enhancement projects included construction of a combination steppass and pool-and-weir fishway in 1988 to increase fish passage into Virginia Lake, annual release of sockeye fry, and fertilizing the lake as part of an enrichment program (USDA Forest Service, 2000). Crittenden Creek may be a candidate for stream channel modification to access habitat above a barrier.

**(4) Wildlife Resources:** Opportunities for moose habitat enhancement occurs along the main tributary streams.

**(5) Timber Resources:** There are approximately 33,372 acres mapped as productive old growth in the roadless area. In addition, 36 acres mapped as second growth have resulted from beach logging activities. Of these acres, 22,973 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), 11,386 acres, or 16 percent of this roadless area, are estimated to be suitable for timber production. Approximately 5,548 of the suitable acres are mapped as high-volume old growth; of these acres, 975 are mapped as high-volume, coarse-canopy old growth.

The preferred alternative of the proposed Madan Timber Sale DEIS, located in this area, encompasses 1,719 acres of harvest and 8.4 miles of permanent road construction in the Moose Creek drainage and along the west side of the area, south of Virginia Lake and Mill Creek. It also proposes to expand two of the Old-Growth Reserves in the area. The Tongass National Forest 10-year action plan schedules this sale for 2003. In addition, it schedules a timber sale to the north of Virginia Lake and Mill Creek called the Crittenden timber sale in 2007 and 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 in the area.

**(7) Minerals:** There are numerous mining claims in the area and one group of claims has been patented. This area contains 5,247 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). A total of 5,247 acres are allocated to the Minerals LUD overlay. 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. The Minerals LUD is also intended to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when minerals development occurs. In addition, this roadless area contains an estimated 42,239 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 6,075 of these acres are considered to have high potential for development.

Mineral development potential in the area is associated with the granitic-type rocks and includes silver, lead, and zinc. Several active and inactive mines are located in the Porterfield Creek and Glacier Creek drainages (USDA Forest Service, 2000).

**(8) Transportation and Utilities:** At least two of the potential road routes to Canada that have been discussed in the past pass through this area. These potential routes were not, however, included in the March 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999). The route along the southern shore of the roadless area is included as a route for consideration by Southeast Conference in their ongoing assessment of long-term transportation needs for Southeast Alaska. Forest roads would be constructed in the area if the Madan Timber Sale project, currently scheduled for 2003, were to take place. No utility corridors are planned for the area.

**(9) Water Availability and Use:** There are no existing or planned hydroelectric or domestic water projects. The Virginia Lake drainage has been identified by the Federal Energy Regulatory Commission (FERC) as a potential hydropower generation site and is withdrawn from competing management. No serious proposals have been received to develop the hydropower potential of this site.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas. Karst resources have been identified in the area, which are relatively unique, in part because of its rarity in the mainland area. The mapped karst resources encompass approximately 969 acres or about one percent of the roadless area. Significant paleontological remains have been found in one of the caves in the area and a plant species new to the Wrangell District was found growing on a marble outcrop below a large sink hole (USDA Forest Service, 2000).

**(11) Land Use Authorizations:** There is one special use permit in Madan Bay and two private parcels at Green Point.

**(12) Land Status:** All National Forest System land is within this roadless area.

## IV. Wilderness Evaluation (Need for Wilderness)

### (1) Public and Congressional Interest:

**(a) Interest Expressed by Local Users and Residents:** Local Wrangell residents have a high degree of interest in maintaining the integrity of the area around Virginia Lake, but many would like to see mining, logging, or other development in other parts of the area, including a road link between Wrangell and the Canadian highway 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 Madan Roadless Area. In 2001, HR 2908 did not propose the area for wilderness, but did propose that the majority of the area be classified as a Congressionally Designated LUD II area and managed in an unroaded condition. It also proposed that Virginia Lake, Porterfield Creek, and Crittenden Creek be classified as Wild and Scenic Rivers.

**(c) Public Input During Forest Plan Revision and Appeals:** Virginia Lake and Blake Channel were specifically addressed in public input during the Forest Plan revision and appeals. In addition, one comment addressed the area as Roadless Area 204. Timber industry comments recommended that Virginia Lake be managed for semi-primitive recreation. The Southeast Alaska Conservation Council identified Blake Channel as an area that merited special protection for outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. The Wrangell Resource Council commented that the roadless area should be managed as primitive recreation.

Timber industry comments recommended that Management Area (MA) S26, which includes the Madan Roadless Area, be managed for unrestricted timber harvest and roading.

Virginia Lake and Creek were identified in the September 25, 1997 appeal filed by the Narrows Conservation Coalition as an area of particular concern to the people in the Stikine area that was left unprotected by the 1997 Tongass Land and Resource Management Plan.

**(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:** Public comments received on the Madan Timber Sale DEIS included a number of comments that specifically addressed whether roads should be constructed in the area. The U.S. Department of Interior and the Alaska Division of Governmental Coordination both requested that a helicopter-only alternative be evaluated. Others commenting stated that the Forest Service should wait for the conclusion of the roadless rule decision-making process before building any more roads, while others noted that roadless areas should remain roadless.

**(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, which adjoins the Stikine-LeConte Wilderness Area, would conserve valuable remaining undisturbed forested habitats on the mainland.

The Alaska Department of Fish and Game rated the Madan roadless area as the fourth highest priority for protection in the Stikine Area. 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 Petersburg said they were opposed to designation of this area as wilderness because of the potential long-term economic impacts on the city.

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. SEACC recommended that the Madan, Aaron, Cone, Harding, and Bradfield complex should be considered one roadless area and should be recommended for permanent protection as LUD II.

The Wrangell Resource Council recommends this area (from Crittenden Creek south to Berg Bay) for LUD II protection.

A number of cave/karst experts and other individuals stated that the Madan Roadless Area represents karstlands in the Central Coast Range Province, which is uncommon on the mainland; while limited in area, the karst and caves found so far are important for their rarity and for the paleontological and biological discoveries that have been made. The commenters noted that the area should be protected along with their drainages.

A number of individual commenters identified Madan Bay and one individual identified Virginia Lake and Garnet Mountain as areas in need of protection. Some individuals recommended this area for permanent protection as wilderness.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Madan area is part of a larger mainland unroaded area that includes the Stikine-LeConte Wilderness on the north and the Aaron Roadless Area to the east. The mainland areas receive light use inland, except around Virginia Lake, which receives moderately-high use.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 65 | 110 |
| Wrangell (Pop. 2,308) | 3 | 5 |
| Petersburg (Pop. 3,224) | 30 | 30 |
| Juneau (Pop. 30,711) | 145 | 150 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Madan Roadless Area is located on the mainland less than 5 miles east of Wrangell and is bounded on the north by the Stikine-LeConte Wilderness; on the west by the Eastern Passage and an area of state-owned land; on the south by Blake Channel; and on the east by the Aaron Creek divide and Roadless Area 205. The roadless area is generally characterized as highly-complex terrain dominated by rugged mountains, many of which reach elevations of over 3,000 feet. The tallest is over 5,000 feet. Between the mountains are deep, broad valleys containing several sizable streams. Near the shore, the landforms become more gentle. Dominant waterforms include a relatively small glacier that occupies the highest mountains, Virginia Lake, and the waterfall on Mill Creek.

The area is mostly unmodified and natural appearing. The area has very high natural integrity and outstanding apparent naturalness. The opportunity for solitude and primitive recreation is very high.

Approximately 7 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The area has high cultural and historic values, and karst geology. Much of the historic value is tied to the areas of mineralization in the area.

The roadless area includes about 15,719 acres of high-volume, old-growth forest. Of these acres, 2,628 are mapped as high-volume, coarse-canopy old growth.

The Madan Roadless Area lies within the Central Coast Range Biogeographic Province and makes up about 9 percent of the province. It is one of nine inventoried roadless areas found in the province that collectively make up about 59 percent of the province. Portions of the Stikine-LeConte Wilderness lie within the Central Coast Range province and make up about 38 percent of the province.

The Madan Roadless Area lies within two ecological sections; it represents 2 percent of the Inside Passage Fjordlands Ecological Section and less than 0.1 percent of the Boundary Ranges Ecological Section. Both of these ecological sections are well represented by existing wilderness (20 and 33 percent, respectively) and by other existing non-development LUDs (32 and 62 percent, including 2 and 1 percent in LUD II, respectively).

The majority (82 percent) of this roadless area is within the Eastern Passage Complex Ecological Subsection; this portion of the roadless area represents 23 percent of the entire ecological subsection. Approximately 23 percent of this ecological subsection is in existing wilderness, 3 percent is in existing LUD II, and an additional 29 percent is protected by other existing non-development LUDs. The Bell Island Granitics Ecological Subsection represents 17 percent of the roadless area. This portion of the roadless area represents 3 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). Approximately 0.8 percent of this roadless area is in the Boundary Ranges Icefields Ecological Subsection; this portion of the roadless area represents less than 0.1 percent of the entire ecological subsection, which is well represented in existing wilderness (32 percent), other existing non-development LUDs (61 percent), and in LUD II (1 percent). The remaining 0.2 percent of this roadless area is in the Zimovia Strait Complex Ecological Subsection; this portion of the roadless area represents 0.1 percent of the entire ecological subsection, 5 percent of which is in existing wilderness and 26 percent in other existing non-development LUDs.

The Madan 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 12$^{th}$ from the highest (along with 12 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for management of the area in an unroaded condition, and some support for designation of the area as wilderness. Designation would create a wilderness that would enlarge the Stikine-LeConte Wilderness toward Wrangell. The area includes relatively high use associated with Virginia Lake, and has ongoing timber sale planning activities. 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 Madan 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. The land in the development LUDs provides an estimated 11,386 acres that are suitable for timber production (13 percent of the suitable acres on the Wrangell Ranger District). Approximately 975 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains 5,247 acres of land identified as a mineral activity tract and an estimated 42,239 acres of undiscovered locatable mineral resources; 6,075 of these acres are considered to have high potential for development. Development of the LUDs that allow such, would reduce the opportunity to expand the Stikine-LeConte Wilderness to the south. The timber sales, 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. The non-development LUDs around Virginia Lake help protect the high public values associated with this area.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, mineral, and special use programs would continue similar to current conditions. No timber harvest would be allowed. Although LUD II designation would not expand the Stikine-LeConte Wilderness as such, it would provide for long-term management in a mostly natural condition. 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. This would expand the Stikine-LeConte Wilderness to the south and provide long-term protection of the values associated with

the roadless area. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses 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 204 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 69,126 |
| 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 | 5,874 | 5,874 | 5,874 | 5,874 | 5,874 | | 5,874 | |
| Semi-remote Recreation | 198 | 198 | 198 | 198 | 198 | | 198 | |
| Recommended LUD II | | | | | | 69,126 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | 2,602 | 2,602 | 2,602 | 2,602 | 2,602 | | 2,602 | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 22,687 | 22,687 | 22,687 | 22,687 | 22,687 | | 22,687 | |
| Modified Landscape | 18,505 | 18,505 | 18,505 | 18,505 | 18,505 | | 18,505 | |
| Timber Production | 19,260 | 19,260 | 19,260 | 19,260 | 19,260 | | 19,260 | |
| **TOTAL** | **69,126** | **69,126** | **69,126** | **69,126** | **69,126** | **69,126** | **69,126** | **69,126** |
| Suitable Timber Lands | 11,386 | 11,386 | 11,386 | 11,386 | 11,386 | 0 | 11,386 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Aaron (205)

**ACRES (NFS):** 79,147

**BIOGEOGRAPHIC PROVINCE:** Central Coast Range and the Ice Fields Province

**ECOLOGICAL SECTION:** Boundary Ranges and Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 27

### I. Overview and Description

**(1) Location and Access:** The area is located on the mainland approximately 10 air miles east of Wrangell and is bounded on the north by the Stikine-LeConte Wilderness; on the west by the Madan Roadless Area; on the south by Blake Channel and the Harding Roadless Area; and on the east by the Cone Roadless Area. The only reasonable access to the area is by boat or floatplane from Berg Bay or by helicopter access to the limited potential landing sites within the area (primarily in the alpine). Good anchorage is available in Berg Bay for small boats. There are no sites suitable for landing wheeled aircraft. There is no ferry service or road access to the area from outside. There is an old trail from saltwater up Berg Creek to one of the mining prospects.

**(2) History:** The area was used by the Tlingit in prehistoric times. A former camp occurs near the mouth of Aaron Creek. Extensive prospecting has occurred in the area over the years, resulting in the filing of numerous mining claims. Some mineral development once occurred in Berg Basin. Beach logging was conducted in two areas on the north side of Aaron Creek estuary in 1960. In the late 1980s, Aaron Creek was considered as an alternative route for a road from saltwater to the Canadian border. A connection to Wrangell is also possible. The tidal flats at Aaron Creek once provided storage for log rafts.

**(3) Geography and Topography:** The area is generally characterized as highly-complex terrain dominated by rugged mountains, many of which reach elevations of over 3,000 feet; the tallest is over 5,000 feet. Between the mountains are deep, broad valleys containing several sizable streams that ultimately feed into the main channel of Aaron Creek. Near its mouth, Aaron Creek forms a wide floodplain and ends in a large grassflat at tidewater. Dominant waterforms include relatively small glaciers which occupy the highest mountains, Aaron Creek, Oerns Creek (a tributary of Aaron Creek), Berg Creek, and numerous small cirque lakes at high elevations. The freshwater lakes account for approximately 64 acres, snow and ice for another 11,094 acres, and rock covers 19,518 acres. Alpine accounts for 3,436 acres. The area contains 15 miles of saltwater shoreline and 53 acres of islands.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The majority of the area is classified as being in the Central Coast Range Biogeographic Province. However, the higher elevations in the north and east are within the Ice Fields Biogeographic Province. The region containing the roadless area is generally characterized as a core of massive, angular mountains capped with ice fields at high elevations along the Canadian border, with somewhat lower mountains, deeply-incised valleys, and glacier-fed streams near the coast. This roadless area is more characteristic of the lower coastal portion of the region. There are no known areas of unique or uncommon plant/soils associations in the area. There is a band of karst north of Aaron Creek estuary.

Ecological Section/Subsection. The Aaron Roadless Area is contained within the Boundary Ranges Ecological Section (M246B) and the Inside Passage Fjordlands Ecological Section (M247E). These areas are represented by three ecological subsections (see table below). The Boundary Ranges Icefields Ecological Subsection represents the more than half of the Aaron 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. The Eastern Passage Complex Ecological Subsection is the other principal subsection, covering 40 percent of the roadless area. Lying west of the Coast Range megalignment, the underlying geology of this subsection is rugged sedimentary and volcanic formations, dissected by numerous streams, extending from Bradfield Canal to Thomas Bay. Mineral soils, of sedimentary and plutonic origin predominate, with organic soils relatively common on poorly drained sites. The Bell Island Granitics Ecological Subsection covers approximately 7 percent of the roadless area. It is characterized by rounded hills and narrow, glacially scoured valleys. Mountain slope soils are usually well-drained, mineral soil (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Boundary Ranges | Boundary Ranges Icefields | 53% |
| Inside Passage Fjordlands | Eastern Passage Complex | 40% |
| | Bell Island Granitics | 7% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less sloping areas and/or areas with impermeable soil materials. These soils are very acidic, have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky. Estuary soils, located in the flats around the mouth of Aaron Creek, are mostly deep, wet, and tend to have a basic pH due to the influence of saltwater.

**(c) Vegetation:** Alpine vegetation (mapped as 3,436 acres) dominates above an elevation of 2,500 feet. Below that elevation, the mountains, hills, and well-drained outwash plains, are dominated by heavy stands of western hemlock, Sitka spruce, Alaska cedar, and scattered stands of western redcedar. There are pockets of poorly-drained land along the valley bottoms that are covered with muskeg and scrub shore pine. Approximately 402 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. The many snowslide and landslide paths on the steep slopes are typically covered with grass, alders and willows.

There are approximately 31,857 acres mapped as forest land, of which 17,099 acres or 54 percent are mapped as productive old-growth forest. Of the productive old growth, 7,338 acres or 43 percent are mapped as high-volume old-growth forest. The productive old growth includes about 787 acres of high-volume, coarse-canopy old growth. There are about 89 acres of second growth resulting from beach logging in 1960.

**(d) Fish Resources:** Fish resources are considered to be of high value in the area. Aaron Creek is the largest salmon producer with pink, chum, coho, and king salmon, as well as steelhead.

**(e) Wildlife Resources:** The area supports all of the major species that inhabit the mainland portion of Southeast Alaska, including Sitka black-tailed deer, black bears, wolves, and small numbers of mountain goats, moose, and brown bear. The lower elevations of Aaron and Oerns Creeks contain a considerable amount of higher volume old-growth forest habitat.

**(5) Management Direction and Current Uses:** This area was allocated to six Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These six LUDs are Recreational River, Scenic

Viewshed, Minerals, Semi-remote Recreation, Scenic River, and Remote Recreation. The Minerals LUD is a secondary LUD that overlays the other land uses.

| LUD | Acres |
|---|---|
| Scenic Viewshed | 46 |
| Minerals* | 7,362 |
| Semi-remote Recreation | 67,878 |
| Scenic River | 5,935 |
| Recreational River | 5,266 |
| Remote Recreation | 23 |

*Note that acres in the Minerals LUD are included in the Semi-remote Recreation and Wild River LUD acres.

Less than 1 percent of the roadless area (not including the Minerals LUD overlay) was allocated to a development LUD (Scenic Viewshed). A band, extending south from the Madan Roadless Area and across the western portion of the area, covering Berg Mountain and along the northeastern side of Berg Creek and across Aaron Creek, was allocated to the Minerals LUD overlay. Approximately 9 percent of the roadless area was allocated to the Minerals LUD overlay.

Most of the roadless area was allocated to a non-development LUD (Semi-remote Recreation, Scenic River, Remote Recreation). Approximately 86 percent of the roadless area was allocated to the Semi-remote Recreation LUD. A half-mile wide corridor along the mainstem of Aaron Creek, including a portion of the east fork of Aaron Creek, and along Oerns and Berg Creeks, were allocated to both the Scenic River LUD and the Recreational River LUD. The Aaron, Oerns, and Berg Creeks represents a total of 21 river miles of eligible scenic river and 15 river miles of eligible recreational river that will be recommended for inclusion in the national Wild and Scenic Rivers System. Adjacent to the Scenic River LUD in Oernes Creek, less than 1 percent of the roadless area was allocated to the Remote Recreation LUD.

The narrow channel and small bay at the mouth of Aaron Creek are used by small pleasure and commercial fishing boats. There is a public recreation cabin on Berg Bay near the mouth of Aaron Creek. The cabin receives moderate to high use and is seasonal in nature. Aaron Creek Trail provides access from the cabin to the grassflats beyond (4 miles), and continues in a more primitive (unmarked and not maintained) condition up Berg Creek into Berg Creek basin (8 miles), a total of 12 miles. There are no commercial overnight facilities in the area. Available information indicates that some subsistence activities occur in the area primarily from residents of Wrangell. Waterfowl hunting occurs at the grassflats, moose and brown bear hunting occurs in the lower elevations, and mountain goats are hunted in the higher elevations.

The band of land allocated to the Minerals LUD overlay is known as the Groundhog/Glacier Tract, which contains deposits of silver and lead. The area is managed to encourage the prospecting, exploration, development, mining, and processing of minerals, in an environmentally sensitive manner. The trail up Berg Creek was originally established to access a mining claim (now abandoned). There are no current mining claims in the area.

**(6) Appearance (Apparent Naturalness):** Overall, the area has high scenic quality with a natural appearing landscape and provides spectacular scenery from Berg Bay, parts of Blake Channel, and elsewhere within the area. Modifications have occurred at limited sites including the recreation cabin, at sites where there was activity on mining claims, and at sites where beach logging occurred in 1960.

**(7) Surroundings (External Influences):** This roadless area is part of a large unroaded area that stretches from the Misty Fiords National Monument south of the area, to the Skagway Juneau Icefield Roadless Area near Juneau. The Stikine-LeConte Wilderness lies to the north and other roadless areas border the area on the south, west, and east. The narrow entrance to this area and the high mountains on the boundaries effectively cut off outside influences. Public interest has historically been expressed in developing a road to Canada along Aaron Creek, which would change the roadless character of the area. This potential route has not, however, received much recent public attention. Recent discussions and studies have focused on the Bradfield Canal route. However, a route that follows the coastline around Berg Bay from Wrangell to the Bradfield is included as a route for consideration by Southeast

Conference in their ongoing assessment of long-term transportation needs for Southeast Alaska. Moderately-heavy boat traffic frequents the Berg Bay area.

**(8) Attractions and Features of Special Interest:** The area contains two inventoried recreation places that cover 4,318 acres, or 5 percent of the roadless area. Special features of this are include: the public recreation cabin; the secure anchorage; the spectacular scenery; the trail; and the opportunity to view or hunt waterfowl, bears, moose on the grassflat and river valley, and mountain goats in the higher elevations.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The roadless area boundaries have not changed between 1989 and 2003, except for the addition of the area around a beach-logged unit in 2003.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Appearance (Apparent Naturalness):** The area is essentially unmodified, except for minor effects from mining and at the cabin site. Approximately 99 percent of the area is natural appearing, where only ecological and geological change has occurred.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and serenity within the area. The only reasonable access to the area is by boat or floatplane from Berg Bay. Helicopter access to the limited potential landing sites within the area (primarily in the alpine) is also possible. Low-flying aircraft follow Blake Channel and boats bypass the area. Present recreation use levels are low except in the immediate vicinity of the recreation cabin and around the grassflats during the fall waterfowl hunting season. Generally, a person camped inland is unlikely to see others. Based on harvest data compiled from 1985 to 1994, the VCU that comprises this area was identified within the top 25 percent of brown bear harvest areas on the Tongass (ADF&G, 1998).

Because of the high degree of isolation experienced by visitors in the area, the steep terrain, and the difficult accessibility of the majority of the area, opportunities for self-reliance, adventure, and challenging experiences are high. 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 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) | 71,448 | 90% |
| Semi-Primitive Non-Motorized (SPNM) | 4,559 | 6% |
| Semi-Primitive Motorized (SPM) | 2,943 | 4% |
| Roaded Natural (RN) | 197 | 0% |

The area contains two inventoried recreation places that cover 4,318 acres, or 5 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPNM | 1 | 1,899 |
| SPM | 1 | 2,420 |
| RN | 0 | 0 |

There is one public recreation cabin and one maintained short trail in the area. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the community of Wrangell in less than 2 hours on somewhat protected waters. Because of this proximity to Wrangell, the area receives some use for hunting waterfowl, deer, and bears, moose on the grassflat and river valley, and mountain goats in the higher elevations.

**(3) Wilderness Attribute Rating System:** In 1977, a Forest Service task force 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 conducted by the Forest Service (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 Aaron Roadless Area was given a rating of 27 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 also given a rating of 27.

**(4) Ecologic and Geologic Values:** This area is part of a very extensive mainland roadless area that includes portions of western British Columbia. As such, it contributes to one of the largest areas of North America that has essentially only been affected by ecologic and geologic processes.

A little less than half of the roadless area is forested and the remainder is dominated by alpine vegetation, rock and ice/snow. Forested areas are primarily located along Aaron and Oerns creek valleys, and along the beach fringe. A relatively high percentage of high-volume old growth occurs in the Oerns Creek valley.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment does not list any VCUs in this area as primary salmon or sport fish producers (ADF&G, 1998). Two Alaska Department of Fish and Game numbered salmon producing streams are present within the area. Aaron Creek, the largest producer, has an average annual escapement of 1,500 pink, and 2,600 chum, coho, and king salmon. Aaron and Oerns Creek have coho, chinook, and steelhead. Oerns Creek provides pink and chum spawning habitat, while Aaron offers intertidal habitat to pink and chum. Substrate in Aaron Creek is inappropriate for extensive pink and chum spawning. Both of these streams offer high value productive fish habitat.

**(b) Wildlife Resources:** A small population of mountain goats lives in the area. Black bears and Sitka black-tailed deer are found in the area, as are brown bear and a small population of moose. Wolves are occasionally seen on the grassflats. The Aaron Creek drainage is a major, forested, north-south travel corridor connecting the Stikine River (over a low pass and along Andrew Creek to the north) with the Berg Bay area and areas along the Blake Channel and Bradfield Canal and River. There are no known concentrations of marine wildlife or sea lion haul-out sites.

Based on harvest data compiled from 1985 to 1994, VCU 503, surrounding Berg Bay and extending north, was identified within 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. In addition, eight sensitive plant species are known or suspected to occur in the Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** A small band of high vulnerability karst lands occurs in the southwestern corner of the area, northeast of Berg Bay. There are 112 acres of high vulnerability karst resources mapped in the area. No other karst topography is known to occur.

**(5) Scientific and Educational Values:** There are opportunities to observe and study fish, wildlife, forest and alpine ecology, ice fields, karst and other geologic formations, and the forces and processes which formed the mountains.

**(6) Scenic Values:** The vast majority of the area appears unmodified. However, minor intrusions such as the recreation cabin and the results of activities on mining claims, are evident when one is close to them. In addition, there are two stands of trees on the steep hillside on the north side of the larger bay that were harvested in 1960; the difference in vegetation is noticeable from a distance, but not readily apparent from the Aaron Creek Trail, which passes through the stands. The area exists in a predominantly natural condition, except near the Berg Bay cabin, where some of the foreground around Berg Bay and the larger bay is visible from boats using Blake Channel. A striking view of high peaks framed by the narrow entrance to Aaron Creek is also seen from the channel. Overall, the area provides spectacular scenery from Berg Bay, parts of Blake Channel, and elsewhere within the area.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Blake Channel, which is used by tour ships; Aaron, Oerns, and Berg Creeks, which are recommended for Wild River status; the Berg Bay/Aaron Creek saltwater use area and boat anchorage; the Berg Bay public recreation cabin; and the Aaron Creek/Berg Bay Trail (#527).

Most of this roadless area, 96 percent, is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type). About 1 percent is inventoried as Variety Class B (possessing landscape diversity that is common for the character type) and the remaining 3 percent is inventoried as Variety Class C (possessing a low degree of landscape diversity).

Almost the entire roadless area, 99 percent, has an Existing Visual Condition (EVC) Type I, where only ecological and geological change has occurred on the landscape. About 1 percent of the area has an ECV Type IV, where changes in the landscape are easily noticed by the average person and may attract some attention.

**(7) Social, Cultural, and Historical Values:** Limited evidence of extensive historical use of the area exists. According to Goldschmidt and Haas (1946) a former Tlingit camp occurs at the mouth of Aaron Creek. Available information indicates that some subsistence activities occur in the area, especially in the vicinity of Berg Bay and primarily by residents of Wrangell. The VCUs of the area were not listed among the VCUs with highest community use values or 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 area is very well defined by natural boundaries, including the ridges surrounding the Aaron, Oerns, and Berg Creek watersheds and saltwater. Feasibility of management as wilderness or in a roadless condition is high unless mining claims are developed or the State decides to construct a highway through it to Canada.

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

**(1) Recreation, Including Tourism Potential:** There is potential for additional trails and shelters located at high elevations. Because of its proximity to Wrangell, there is potential for helicopter tours and access to the alpine and glaciers of the area. There is potential for increased use of the area for hunting waterfowl, brown bears, mountain goats, moose, and deer. In 1996, the Alaska Visitor Association proposed a leased proprietary camp with a capacity of 15 camp units for Aaron, Oerns, and Berg Creeks in their comments on the 1997 Tongass Land and Resource Management Plan.

**(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 Resource**: No fish habitat enhancement projects have been identified for this area.

**(4) Wildlife Resource:** The grassflats have been burned several times to improve waterfowl habitat. Enhancement opportunities include slashing portions of the older, decadent willow to promote new growth for moose, and improvement of habitat for waterfowl. The Aaron Creek drainage is a major, forested, north-south

travel corridor connecting the Stikine River (over a low pass and along Andrew Creek to the north) with the Berg Bay area and areas along the Blake Channel and Bradfield Canal and River.

**(5) Timber Resources:** There are approximately 17,099 acres mapped as productive old growth in the roadless area. In addition, approximately 89 acres of second-growth spruce and alder have resulted from timber harvest in 1960. Of these acres, 6,789 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), less than 10 acres (less than one percent) of this roadless area are estimated to be suitable for timber production. Less than 10 acres are mapped as high-volume old growth and none are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area would be closely linked to the development of an access road up the Aaron and Oerns Creek valleys and the development of a log transfer facility (LTF).

**(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 roadless area contains 10,522 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). A total of 7,362 of these acres are allocated to the Minerals LUD overlay. 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. The Minerals LUD is also intended to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when minerals development occurs. In addition, the roadless area contains an estimated 48,197 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 5,285 of these acres are considered to have high potential for development.

The land allocated to the Minerals LUD overlay is located in the western portion of the area, covering Berg Mountain and along the northeastern side of Berg Creek and across Aaron Creek. This area is known as the Groundhog/Glacier Tract, which contains deposits of silver and lead, and was estimated to have a gross value of $238 million (USDA Forest Service, 1997). This area also contains a few abandoned mining claims.

**(8) Transportation and Utilities:** There are no existing roads within or adjacent to the area. Road development for the purpose of timber harvest is planned in the adjacent Madan Roadless Area. Two routes were considered for a possible road link between saltwater and the Canadian highway system in the late 1980s. One of these routes would pass through the Aaron Roadless Area. It would come from Wrangell, up Aaron Creek, and would enter the adjacent Cone Roadless Area and travel down the West Fork of the Katete River, accessing the main Stikine River Valley. This potential route has not, however, received much recent public attention. Recent discussions and studies have focused on the Bradfield Canal route. The road link project was not included in the March 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999). However, a shoreline route from Wrangell to the Bradfield is included as a route for consideration by Southeast Conference in their ongoing assessment of long-term transportation needs for Southeast Alaska. The flats at Aaron Creek once provided storage for log rafts.

**(9) Water Availability and Use:** There are no existing or planned hydropower or domestic water projects in the area.

**(10) Areas of Scientific Interest:** The mapped karst resources encompass approximately 112 acres or less than one percent of the roadless area. The area contains no inventoried potential Research Natural Areas. The area has not been specifically identified for any scientific studies.

**(11) Land Use Authorizations:** There are no land use authorizations in the area. A log storage area was historically located at the mouth of Aaron Creek under permit with the State. This permit has expired and the log storage pilings have been removed.

**(12) Land Status:** The entire roadless area, including adjacent lands, is National Forest System lands.

## IV. Wilderness and Roadless Area Evaluation

### (1) Public and Congressional Interest

**(a) Interest Expressed by Local Users and Residents:** Local Wrangell residents have a moderate degree of interest in maintaining the integrity of the area. Some have historically expressed interest mining development and the construction of a road connecting Wrangell to the Canadian road network. Others support maintaining the roadless character of the area for wildlife and scenic values.

**(b) Congressional Interest:** Two bills from the U.S. House of Representatives included wilderness proposals for Southeast Alaska. In 1989, U.S. 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:** No specific recommendations for wilderness were made. The Wrangell Resource Council recommended that the area be managed under the Primitive Recreation LUD. In 1996, the Alaska Visitor Association proposed a leased proprietary camp with a capacity of 15 camp units for Aaron, Oerns, and Berg Creeks; this would be consistent with the Semi-primitive Recreation designation. Comments from the timber industry recommended that the area be available for unrestricted timber harvest and roading.

**(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 were identified for this 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. They indicated that protection of this area, in combination with the Madan (#204) and Harding (#207) Roadless Areas, would conserve valuable remaining undisturbed forested habitats on the mainland of southeast Alaska

The Alaska Department of Fish and Game rated the Aaron roadless area as the fifth highest priority for protection in the Stikine Area. 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 Petersburg said they were opposed to designation of this area as wilderness because of the potential long-term economic impacts on the city.

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. SEACC recommended that the Madan, Aaron, Cone, Harding, and Bradfield complex should be considered one roadless area and should be recommended for permanent protection as LUD II.

The Wrangell Resource Council recommended the portion of this area around Berg Bay be included with the Madan Roadless Area under LUD II protection.

Some individuals recommended this area for permanent protection as wilderness.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Aaron Creek area is part of a much larger mainland, unroaded land mass that includes the adjacent areas: the Stikine-LeConte Wilderness to the north, the

Madan Roadless Area to the west, the Cone Roadless Area to the east, and the Harding Roadless Area to the south. The adjacent mainland areas generally receive light use, primarily near saltwater. Inland use is generally very light with the exception of the Stikine River corridor in the Stikine-LeConte Wilderness and the Virginia Lake area in the Madan Roadless Area.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 60 | 105 |
| Wrangell (Pop. 2,308) | 10 | 25 |
| Petersburg (Pop. 3,224) | 40 | 50 |
| Juneau (Pop. 30,711) | 150 | 175 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Aaron Roadless Area is located on the mainland approximately 10 air miles east of Wrangell and is bounded on the north by the Stikine-LeConte Wilderness; on the west by the Madan Roadless Area; on the south by Blake Channel and the Harding Roadless Area; and on the east by the Cone Roadless Area. The area is generally characterized as highly-complex terrain dominated by rugged mountains, many of which reach elevations of over 3,000 feet; the tallest is over 5,000 feet. Between the mountains are deep, broad valleys containing several sizable streams that ultimately feed into the main channel of Aaron Creek. The mountains include relatively small glaciers and small cirque lakes at high elevations. Near its mouth, Aaron Creek forms a wide floodplain and ends in a large grassflat at tidewater.

The roadless area is mostly unmodified. The area has outstanding natural integrity and apparent naturalness. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding. The area has very high scenic values; approximately 96 percent of the landscape is considered distinctive from a scenery standpoint.

The roadless area includes about 7,338 acres of high-volume, old-growth forest. Of these acres, 787 are mapped as high-volume, coarse-canopy old growth.

Approximately 55 percent of the Aaron Roadless Area lies within the Central Coast Range Biogeographic Provinces and makes up about 6 percent of the province. It is one of nine inventoried roadless areas found in the province that collectively make up about 59 percent of the province. Portions of the Stikine-LeConte Wilderness lie within the Central Coast Range province and make up about 38 percent of the province. The remaining 45 percent of the roadless area lies within the Ice Fields Province and makes up 1 percent of that province. It is one of nine roadless areas found in the province that collectively make up about 67 percent of the province. The Ice Fields Province includes several wildernesses, which make up approximately 33 percent of it.

The Aaron Roadless Area lies within two ecological sections; it represents 1 percent of the Inside Passage Fjordlands Ecological Section and 1 percent of the Boundary Ranges Ecological Section. Both of these ecological sections are well represented by existing wilderness (20 and 33 percent, respectively) and by other existing non-development LUDs (32 and 62 percent, including 2 and 1 percent in LUD II, respectively).

Approximately half (53 percent) of this roadless area is within the Boundary Ranges Icefields Ecological Subsection; this portion of the roadless area represents 1 percent of the entire ecological subsection, which is well represented in existing wilderness (32 percent) and by other existing non-development LUDs (61 percent). Forty percent of this roadless area is within the Eastern Passage Complex Ecological Subsection; this portion of the roadless area represents 13 percent of the entire ecological subsection. Approximately 23 percent of this ecological subsection is in existing wilderness, 3 percent is in existing LUD II, and an additional 29 percent is protected by other existing non-development LUDs. The Bell Island Granitics Ecological Subsection represents 7 percent of the roadless area; this portion of the roadless area represents 2 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).

The Aaron Roadless Area was rated 27 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 2nd from the highest (along with two other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for management of the area in an unroaded condition, but very little support for designation of the area as wilderness. The area receives relatively high recreation use, especially for hunting. 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 Aaron Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Nearly all of the roadless area would be managed under non-development LUDs, which maintain the high wilderness attributes of the area, including the option of expanding the Stikine-LeConte Wilderness to the south in the future. Timber harvest and road development could occur in the remaining less than 1 percent. The land in the development LUDs provides an estimated 4 acres that are suitable for timber production (less than 1 percent of the suitable land on the Wrangell Ranger District). None of those suitable lands are classified as high-volume, coarse-canopy old growth. The roadless area contains 10,522 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. In addition, the roadless area contains an estimated 48,197 acres of undiscovered locatable mineral resources; 5,285 of these acres are considered to have high potential for development. The recreation, minerals, and special use programs would continue.

Under Alternative 6, the entire area would be converted to Recommended LUD II LUD. The ongoing recreation, mineral, and special use programs would continue similar to current conditions. No timber harvest would be allowed. Although LUD II designation would not expand the Stikine-LeConte Wilderness as such, it would provide for long-term management in a mostly natural condition. 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, which if designated, would expand the Stikine-LeConte Wilderness to the south. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses 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 205 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 79,147 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | 23 | 23 | 23 | 23 | 23 | | 23 | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | | | | | | | | |
| Semi-remote Recreation | 67,877 | 67,877 | 67,877 | 67,877 | 67,877 | | 67,877 | |
| Recommended LUD II | | | | | | 79,147 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | 11,201 | 11,201 | 11,201 | 11,201 | 11,201 | | 11,201 | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 46 | 46 | 46 | 46 | 46 | | 46 | |
| Modified Landscape | | | | | | | | |
| Timber Production | | | | | | | | |
| TOTAL | 79,147 | 79,147 | 79,147 | 79,147 | 79,147 | 79,147 | 79,147 | 79,147 |
| Suitable Timber Lands | 4 | 4 | 4 | 4 | 4 | 0 | 4 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Cone (206)

**ACRES (NFS):** 127,874

**BIOGEOGRAPHIC PROVINCE:** Ice Fields and Central Coast Range

**ECOLOGICAL SECTION:** Boundary Ranges

**2003 WILDERNESS ATTRIBUTE RATING:** 28

### I. Overview and Description

**(1) Location and Access:** The Cone Roadless Area is located on the mainland approximately 15 air miles east of Wrangell. Wrangell is served by the Alaska Marine Highway and regular jet service. It is bounded on the north and east by the Canadian border; on the west by the Stikine-LeConte Wilderness and the Aaron Roadless Area; and on the south by the Harding and Bradfield Roadless Areas. Access is only by foot or helicopter. No suitable sites exist for landing wheeled aircraft or floatplanes.

**(2) History:** Since the area drains entirely into Canada and is accessible only with great difficulty from the Alaskan side, there has been little use of the area in the past. The area has been prospected for minerals and claims have been located. Two routes were considered for a possible road link between saltwater and the Canadian highway system in the late 1980s. Portions of both routes would pass through this roadless area. The Bradfield route is included as a route for consideration by Southeast Conference in their ongoing assessment of long-term transportation needs for Southeast Alaska, and would cross the eastern portion of the Cone Roadless Area. This route was also considered for development of a 69 kV transmission line in the late 1980s, and may be considered again because of the Swan-Lake Tyee Intertie line which is under construction.

**(3) Geography and Topography:** The area is generally characterized as highly-complex terrain dominated by rugged mountains, many of which reach elevations of over 5,000 feet; the tallest is over 6,800 feet. Between the mountains are deep, narrow valleys containing several sizable streams, including the Katete River and its West Fork, which feed into the Stikine River to the north in Canada, and the Craig River, which flows northeast into Canada and ultimately flows into the Iskut River. Dominant waterforms include the high velocity streams and small glaciers that occupy the highest mountains. Alpine covers approximately 2,361 acres, ice and snow cover another 32,295 acres, and rock accounts for about 39,824 acres. The area does not contain any shoreline on saltwater or freshwater lakes.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The northern portion of the area is located in the Central Coast Range Biogeographic Province, but the majority of the area is in the Ice Fields Province. The roadless area is generally characterized as a core of massive, angular mountains capped with ice fields at high elevations near the Canadian border, with somewhat lower mountains, deeply incised valleys and glacier-fed streams closer to the Stikine River. However, it does not contain the massive ice fields present elsewhere along the coast range. The Stikine River system, located north of the Cone Roadless Area, has a major continental influence and provides a migration corridor for plant and animal species. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The Cone Roadless Area is contained entirely within the Boundary Ranges Ecological Section (M246B). This area is represented by two ecological subsections (see table below). The Boundary Ranges Icefields Ecological Subsection covers the majority, 92 percent, of the Cone 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. The remainder, 8 percent, of the roadless area is composed of the Stikine-Taku River Valleys Ecological Subsection. These rivers, which carry a large amount of sediment, have cut deeply incised valleys through the Coast Range. The erodible, poorly developed soils on the valley floors are colonized by alder, willow, and cottonwood (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Boundary Ranges | Boundary Ranges Icefields | 92% |
| | Stikine-Taku River Valleys | 8% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are very acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils have developed on less sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby, forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Alpine vegetation mapped as 2,361 acres, dominates above an elevation of 2,500 feet. Below that elevation, the steep mountain sides are heavily marked with snowslide and landslide paths, which are typically covered with grass, alders and willows. Occasionally, cottonwoods and fir may be found along the valley bottoms and floodplains. Approximately 149 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 29,578 acres mapped as forest land, of which 10,698 acres or 36 percent are mapped as productive old-growth forest. Of the productive old growth, 2,393 acres or 22 percent are mapped as high-volume old-growth forest. The productive old growth includes about 26 acres of high-volume, coarse-canopy old growth. There is no second-growth forest where timber harvest has occurred in the past.

**(d) Fish Resources:** Fish resources in the area are considered to be of moderate value from a regional perspective. The Katete River, which empties into the Stikine River in Canada, and produces chum, chinook, and coho salmon, is the largest salmon producer (especially the West Fork) within the Cone Roadless area.

**(e) Wildlife Resources:** A small population of mountain goats ranges over the area, as do black and brown bears, wolves, Sitka black-tailed deer, and moose. Productive old-growth forest habitat is limited primarily to the lower Katete and Craig River drainages.

**(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 Timber Production and Semi-remote Recreation.

| LUD | Acres |
|---|---|
| Timber Production | 73 |
| Semi-remote Recreation | 127,801 |

Less than 1 percent of the roadless area was allocated to one development LUD, Timber Production. The Timber Production LUD is located in the southeastern part of this roadless area.

Almost 100 percent of the area was allocated to one non-development LUD. This widely allocated designation is the Semi-remote Recreation LUD.

Land or water access to the area is very difficult, requiring helicopter access or entry into Canada on the Stikine River, then up the Katete River mostly on foot to the U.S. border, and then entry into the area on foot. It is also theoretically possible, but very difficult, to access the area through adjacent roadless areas. There are no facilities of any kind. The area receives little use and there is no known subsistence use.

**(6) Appearance (Apparent Naturalness):** Overall, the area has high scenic quality with a natural appearing landscape and provides spectacular scenery from the Stikine River valley and from within the area.

**(7) Surroundings:** This roadless area is part of a large unroaded area that stretches from the Misty Fiords National Monument south of the area, to the Skagway Juneau Icefield Roadless Area near Juneau. Three other roadless areas border most of the area. The Stikine Leconte Wilderness area lies to the northwest of this area. Canada is adjacent to the north boundary. Activities on the Canadian side of the border are most likely to influence this area. While there are no known intrusions at the present time, the area around the Iskut River in Canada is heavily mineralized and mining discoveries could lead to mine development in the area. A potential dam for hydroelectric power generation on the Iskut River in Canada may affect this area to some degree.

**(8) Attractions and Features of Special Interest:** The natural features of the area, remoteness, solitude, the scenery, and the opportunity to see wildlife and to study the processes that formed this country may all be attractions. The area contains one inventoried recreation places and there are no improved trails.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The roadless area boundaries have not changed between 1989 and 2003.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Appearance (Apparent Naturalness):** The area is essentially unmodified, except for minor effects from old mineral prospecting. The majority of this roadless area (98 percent) is unmodified. The natural appearance of the landscape dominates the entire area, including the area where modification has occurred. The natural integrity and appearance of this area is, therefore, suitable for wilderness classification.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, and Challenging Experiences, and Primitive Recreation:** There is a outstanding opportunity for solitude and primitive recreation within the area. Low-flying airplanes traveling between Wrangell and the Canadian mines near the Iskut River may at times pass over the area and be observed by people in this roadless area. Present recreation use levels are very low because access is very difficult. A person camped in the area is very unlikely to see others.

Because of the high degree of isolation experienced by visitors in the area, the steep terrain, and the difficult accessibility of the majority of the area, opportunities for self-reliance, adventure, and challenging experiences are high. 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 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.

There are no developed recreation facilities in the area. The character of the landforms allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible with difficulty. It requires helicopter access or entry into Canada by way of the Stikine River Valley and then on foot up the Katete River drainage,

presenting a high degree of physical challenge. It is also theoretically possible, but very difficult, to access the area through adjacent roadless areas.

| ROS Class | Acres | Percent of Total ROS |
|---|---|---|
| Primitive (P) | 127,873 | 100% |

The area contains one inventoried recreation place that covers less than one acre, or less than one percent of the roadless area.
.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| P | 1 | <1 |

**(3) Wilderness Attribute Rating System:** In 1977, a Forest Service task force 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 conducted by the Forest Service (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 Cone Roadless Area was given a rating of 27 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 also given a rating of 28. The higher score reflects a very low or no effect on natural integrity from old mineral activity, as well as the overall outstanding wilderness attributes offered by the area.

**(4) Ecologic and Geologic Values:** This area is part of a very extensive mainland roadless area, which includes portions of western British Columbia. As such, it contributes to one of the largest areas of North America that has essentially only been affected by ecologic and geologic processes.

This roadless area is partially forested. Forested areas are located along the river valleys, with areas of old-growth forest concentrated along the Katete and Craig River drainages by the Canadian border.

**(a) Fish Resources:** The VCUs in this area were not rated as primary salmon or sport fish producers (ADF&G, 1998).

Several drainages in this area form the headwaters of the Katete and other rivers that empty into the Stikine River. No escapement data is available for the Katete River, much of which is located in Canada. The Alaska Department of Fish and Game Stream Catalog indicate that chum, chinook, and coho salmon inhabit the West Fork Katete River, which is considered to have moderate fish habitat value from a regional perspective.

**(b) Wildlife Resources:** This area is only partially forested and does not significantly contribute to the Tongass old-growth reserve network. It does, however, provide opportunities for wildlife, such as wolves, bears, and moose, to move between the Stikine and Iskut River valleys in Canada to the Aaron Creek, Harding River, and Bradfield River drainages. Productive old-growth forest habitat is limited primarily to the lower Katete and Craig River drainages.

**(c) Threatened and Endangered 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 Cone. 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 Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are no known karst or cave resources in the area.

**(5) Scientific and Educational Values:** There are opportunities to observe and study fish, wildlife, forest and alpine ecology, ice fields, geologic formations, and the forces and processes which formed the mountains.

**(6) Scenic Values:** The visual landscape is characterized by a highly-complex terrain dominated by rugged mountains and glaciers and deep narrow valleys containing some sizeable streams. No Visual Priority Routes and Use Areas were identified by the Forest Plan within the area.

About 81 percent of this roadless area is inventoried Variety Class A (possessing landscape diversity that is unique for the character type), and 19 percent is inventoried Variety Class B (possessing landscape diversity that is common for the character type). The majority of this roadless area, 98 percent, has an Existing Visual Condition (EVC) Type I, where only ecological and geological change has occurred. Two percent of this roadless area is EVC Type III, where the natural appearance of the landscape remains dominant, but the average forest visitor notices changes in the landscape.

**(7) Social, Cultural, and Historic Values:** This area is located approximately 15 air miles from Wrangell, which is the closest community. Wrangell is also the closest stop on the Alaska Marine Highway. There are no developed recreation facilities or improved trails in the area and present recreation use levels are very low. There is no known current or historic subsistence use. The VCUs in this area were not included among those with the highest community use value or among the VCUs with highest sensitivity to disturbance of community use areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The boundaries, of this roadless area are well defined by topographic features that separate the Katete and Craig River watersheds from watersheds in adjacent roadless areas and the Stikine-LeConte Wilderness. The north and east boundaries of this roadless area are formed by the U.S./Canadian border. This roadless area is part of a larger mainland unroaded area that includes the Stikine-LeConte Wilderness to the northwest, the Bradfield Roadless Area to the south, the Harding Roadless Area to the southwest, the Aaron Roadless Area to the west, and the Canadian mountains to the north and east. The immediately surrounding lands are allocated to the Semi-remote Recreation and Wilderness LUDs.

A portion of the adjacent Bradfield Roadless Area is allocated to the Timber Production LUD. Timber harvest and road construction has occurred along the north and east forks of the Bradfield River, approximately 5 miles south of the Cone Roadless Area. There currently is limited development on the adjacent lands on the Canadian side of the border, but the area around the Iskut River to the north is heavily mineralized and mining discoveries could lead to mine development closer to the Cone Roadless Area.

The Cone Roadless Area has well defined boundaries, is surrounded by unroaded land, and is very difficult to access. These characteristics suggest that management of this area as wilderness would require little change from present management conditions.

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

**(1) Recreation, Including Tourism Potential:** The potential for increased recreation use or facility development is low unless access is improved. If a road to Canada is constructed through the area, then use and demand would likely increase. However, a lack of specific destination features would limit use. Because of its proximity to Wrangell, there is potential for helicopter tours and access to the alpine and glaciers of the area.

**(2) Subsistence Uses:** There is no known current or historic subsistence use of the area. 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:** No fish habitat enhancement projects have been identified for this area.

**(4) Wildlife Resources:** There is potential for moose and mountain goat habitat enhancement in the area. This roadless area is only partially forested and would not contribute significantly to the old-growth reserve network. It does, however, provide opportunities for wildlife, such as wolves, bears, and moose, to move between the Stikine and Iskut River valleys in Canada to the Aaron Creek, Harding River, and Bradfield River drainages.

**(5) Timber Resources:** There are approximately 10,698 acres mapped as productive old growth and no acres mapped as second growth due to harvesting in the roadless area. Of these acres, 3,899 acres are categorized as tentatively suitable for timber production. However, because of the LUDs identified for this area under the current Forest Plan, none of these acres are categorized as suitable for timber production. Even if the Forest Plan classified the area as suitable, harvest would not be likely unless a road is built into the area for other purposes. The nature of the steep slopes and scattered timber make it doubtful that timber harvest would be economical even if the road were financed by other sources.

**(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:** Prospecting has occurred and there are several invalid mining claims in the area. The roadless area contains an estimated 68,701 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 19,225 of these acres are considered to have moderate potential for development.

**(8) Transportation and Utilities:** Two routes were considered for a possible road link between saltwater and the Canadian highway system in the late 1980s. Portions of both routes would pass through this roadless area. One route would come from Wrangell, up Aaron Creek, and would enter this roadless area along the West Fork of the Katete River, accessing the main Stikine River valley. Another proposal is to build a road from Bradfield Canal up the North Fork of the Bradfield River and enter Canada through this roadless area by way of the Craig River drainage. The possibility of a new roadway along the Bradfield Canal was considered as part of the Southeast Alaska Transportation planning process. It was also the subject of a 1998 feasibility report prepared by the U.S. Forest Service for the U.S. Senate Committee on Appropriations. This road was not, however, included in the March 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999). The Bradfield route is included as a route for consideration by Southeast Conference in their ongoing assessment of long-term transportation needs for Southeast Alaska, and would cross the eastern portion of the Cone Roadless Area. This route was also considered for development of a 69 kV transmission line in the late 1980s, and may be considered again because of the Swan-Lake Tyee Intertie line which is under construction.

**(9) Water Availability and Use:** There are no recreation or other facilities located in this roadless area. As a result, there is no demand for water for domestic use. There are a number of rivers running through this area, but the lack of roads and generally poor access suggest that this is unlikely to be a good site for hydroelectric development.

**(10) Areas of Scientific Interest:** The area contains no inventoried potential Research Natural Areas. The area has not been specifically identified for any scientific value.

**(11) Land Use Authorizations:** There are no land use authorizations in the area. Authorization was given for development of a 69 kV electric transmission line along the North Fork of the Bradfield River to the Canadian border in the late 1980s. A portion of this transmission line would have been located in the Cone Roadless Area. Authorization for this transmission line was, however, terminated with no work done on the project.

**(12) Land Status:** The entire roadless area consists of National Forest System lands. National Forest System lands also occupy all adjacent areas within the United States. Canadian land occupy the areas adjacent to the north and east boundaries.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest**

**(a) Interest associated with Local Users and Residents:** There is virtually no local use of the area. Local Wrangell residents have been and continue to be interested in developing a road from Wrangell through this area to the Canadian highway system.

**(b) Congressional Interest:** Two bills from the U.S. House of Representatives included wilderness proposals for Southeast Alaska. In 1989, U.S. 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:** This area was not specifically identified in the public comments received during the Forest Plan revision and appeals. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

**(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review:** This area was not specifically identified in the public comments received on the Roadless Area Conservation Rule or the Road Management Policy Review.

**(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 that the Madan, Aaron, Cone, Harding, and Bradfield complex should be considered one roadless area and should be recommended for permanent protection 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 mayor of Wrangell noted that the Cone area should not be recommended for wilderness because two of the road corridor routes to Canada that would be precluded (i.e., the Bradfield and Craig rivers). They indicated that designation as wilderness would require the Stikine and Unuk Rivers as the best option for a route to tidewater from Canada, and these areas should be avoided. The highway connection is very important for Wrangell.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Cone Roadless Area is part of a larger mainland unroaded land mass that is located between the Bradfield Roadless Area to the southeast, the Harding Roadless Area to the southwest, the Aaron Roadless Area to the west, and the Canadian mountains to the north. The adjacent mainland areas generally receive light use, primarily near saltwater. Inland use is generally very light with the exception of the Stikine River corridor in the Stikine-LeConte Wilderness, the lower portions of the North Fork and East Fork of the Bradfield River, the lower Harding River, and the flats near the mouth of Aaron Creek.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 65 | 140 |
| Wrangell (Pop. 2,308) | 15 | 40 |
| Petersburg (Pop. 3,224) | 45 | 60 |
| Juneau (Pop. 30,711) | 155 | 160 |

The area is not accessible by water.

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Cone Roadless Area is located on the mainland approximately 15 air miles east of Wrangell. It is bounded on the north and east by the Canadian border; on the west by the Stikine-LeConte Wilderness and the Aaron Roadless Area; and on the south by the Harding and Bradfield Roadless Areas. The area is generally characterized as highly-complex terrain dominated by rugged mountains, many of which reach elevations of over 5,000 feet; the tallest is over 6,800 feet. Between the mountains are deep, narrow valleys containing several sizable streams. Dominant waterforms include the high velocity streams and small glaciers that occupy the highest mountains. The area is mostly unmodified. The roadless area has outstanding natural integrity, apparent naturalness, and opportunity for solitude and primitive recreation.

The area has very high scenic qualities; approximately 81 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The area is rugged, has small glaciers and icefields, and is very difficult to access.

The roadless area includes about 2,393 acres of high-volume, old-growth forest. Of these acres, 26 are mapped as high-volume, coarse-canopy old growth.

The Cone Roadless Area lies partially within the Ice Fields and Central Coast Range Biogeographic Provinces. Approximately 79 percent of the roadless area is within the Ice Fields province and makes up about 3 percent of that province. It is one of nine inventoried roadless areas found in the province that collectively 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 other 21 percent of the Cone Roadless Area is located within the Central Coast Range province and makes up about 4 percent of the province. It is one of nine inventoried roadless areas found in the province that collectively make up about 59 percent of the province. Portions of the Stikine-LeConte Wilderness lie within the Central Coast Range province and make up about 38 percent of the province.

The Cone 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).

Approximately 92 percent of the roadless area is in the Boundary Ranges Icefields Ecological Subsection; this portion of the roadless area represents 3 percent of the entire ecological subsection, which is well represented in existing wilderness (32 percent) and by other existing non-development LUDs (61 percent). The remaining 8 percent of the roadless area is in the Stikine-Taku River Valleys Ecological Subsection; this portion of the roadless area represents 13 percent of the entire ecological subsection. This ecological subsection is well represented by existing wilderness (43 percent) and by other existing non-development LUDs (53 percent).

The Cone Roadless Area was rated 28 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked the highest among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the area in an unroaded condition, and some support for designation as wilderness. Designation would create a wilderness which has the highest WARS rating of all the inventoried roadless areas on the Tongass. It would expand the Stikine-LeConte Wilderness. It would include some zones of higher mineralization. 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 Cone Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Nearly all of the roadless area would be managed under non-development LUDs, which mostly maintains the outstanding wilderness attributes and values associated with the size and isolation of the area. Timber harvest and road development could occur in the remaining less than 1 percent. However, none of the land in the development

LUDs is considered suitable for timber production. The roadless area contains an estimated 68,701 acres of undiscovered locatable mineral resources; 19,225 of these acres are considered to have moderate potential for development. The recreation, minerals, and special use programs would continue.

Under Alternative 6, the entire area would be converted to Recommended LUD II. Although the LUD II would not extend the Stikine-LeConte Wilderness, it would provide for long-term protection of the same wilderness attributes and values if designated. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. No timber harvest would be allowed.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. The roadless area's outstanding wilderness attributes and values associated with its size and isolation would be provided long-term protection and extend the Stikine-LeConte Wilderness to the south and east if designated wilderness. The ongoing recreation, minerals, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 206 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 127,874 |
| 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 | 127,801 | 127,801 | 127,801 | 127,801 | 127,801 | | 127,801 | |
| Recommended LUD II | | | | | | 127,874 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | 73 | 73 | 73 | 73 | 73 | | 73 | |
| **TOTAL** | **127,874** | **127,874** | **127,874** | **127,874** | **127,874** | **127,874** | **127,874** | **127,874** |
| Suitable Timber Lands | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Harding (207)

**ACRES (NFS):** 179,350

**BIOGEOGRAPHIC PROVINCE:** North Half: Central Coast Range, and South Half: North Misty Fiords (also a small portion in the Ice Fields Province and Revilla Island/Cleveland Peninsula Province)

**ECOLOGICAL SECTION:** Boundary Ranges, Inside Passage Fjordlands, and Coast Mountain Batholith Fjordlands

**2002 WILDERNESS ATTRIBUTE RATING:** 20 (22)

### I. Overview and Description

**(1) Location and Access:** The area consists of two approximately equal portions, one north and one south of Bradfield Canal. Both halves are on the mainland. The north half is approximately 15 miles southeast of Wrangell and is bounded on the west by Blake Channel, on the south by Bradfield Canal, and on the north and east by other roadless areas. The south half is approximately 30 miles southeast of Wrangell and is bounded on the west by the Anan Creek Congressionally designated LUD II area, on the north by the Bradfield Canal, on the southeast by Misty Fiords National Monument, and by other roadless areas on the northeast and south. The area is accessed by saltwater along Blake Channel and by Bradfield Canal. Several freshwater lakes are accessible by floatplane. There is a gravel landing strip suitable for landing small-wheeled aircraft near the Tyee power generation site, immediately east of the Harding Roadless Area. Access into the interior is by foot or helicopter.

**(2) History:** The area was used by the Stikine Tlingit in prehistoric and historic times. While the area has probably been prospected for minerals, there are no known mining claims. Two heritage resource sites, an intertidal fish trap and an alpine rock cairn site, that are considered eligible for the National Register of Historic Places, are located in the south half of the roadless area. In 1984, a 138 kV powerline was constructed from the Tyee power project across the part of the area along the south side of Bradfield Canal. A small harvest unit on the north shore of Bradfield Canal was beach-logged in 1955. In the mid-1990s, the Campbell timber sale was implemented along the north side of Bradfield Canal. No roads were built, but a log transfer facility and sort yard were developed and overstory removal was conducted by helicopter on 15 units. In the 1990s a series of jump pools were developed on the Harding River to improve migratory access for salmonids.

**(3) Geography and Topography:** The area is generally characterized as highly-complex terrain dominated by rugged mountains, many of which reach elevations of over 3,000 feet. The tallest is over 4,000 feet. Between the mountains are deep, narrow valleys containing several sizable streams that ultimately feed into Blake Channel or Bradfield Canal. Major streams include Harding River, Marten Creek, and Tom Creek in the north half and Eagle River and Hoya Creek in the south half. A number of lakes, including Eagle Lake (which is 4 miles long), cover about 2,057 acres. Relatively small glaciers occupy the highest mountains, especially in the Harding River drainage. Alpine accounts for approximately 6,873 acres, ice and snow covers 5,927 acres, and rock covers 34,537 acres. The area also includes 86 acres of associated islands. The area contains 51 miles of shoreline on saltwater.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The majority of the north half of the area is in the Central Coast Range Biogeographic Province, while the south half is in the North Misty Fiords Biogeographic Province. The region is generally characterized as a core of massive, angular mountains capped with ice fields at high elevation along the Canadian border, with somewhat lower mountains, deeply-incised valleys, and glacier-fed streams closer to the coast. This roadless area is more characteristic of the lower coastal portion. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The Harding Roadless Area is contained within the Inside Passage Fjordlands Ecological Section (M247E), Boundary Ranges Ecological Section (M246B), and a portion within the Coast Mountain Batholith Fjordlands Ecological Section (M247K). These areas are represented by four ecological subsections (see table below). The Boundary Ranges Icefields Ecological Subsection covers one-third of the Harding 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. The Bell Island Granitics Ecological Subsection and the Eastern Passage Complex Ecological Subsection each cover one-quarter of the Harding Roadless Area. Steep, forested slopes and large alpine areas are common to both of these subsections. The remainder of the area, approximately 18 percent, is within the Misty Fiords Granitics Ecological Subsection, a glacially scoured, rugged granitic batholith (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Boundary Ranges | Boundary Ranges Icefields | 32% |
| Inside Passage Fjordlands | Bell Island Granitics | 25% |
| | Eastern Passage Complex | 25% |
| Coast Mountain Batholith Fjordlands | Misty Fiords Granitics | 18% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately well-drained soils are found on moderate to steep mountain slopes with permeable parent materials. These soils are very acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby, forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

Estuary soils, in the flats around the mouths of the larger streams, are mostly deep, wet and tend to have a basic pH due to the influence of saltwater.

**(c) Vegetation:** Above 2,500 feet, alpine vegetation dominates Approximately 6,873 acres of alpine are mapped for the area. Below that elevation the steep mountain sides are heavily marked with snowslide and landslide paths that are typically covered with grass, alders and willows. Occasionally, cottonwoods may be found along the valley bottoms and floodplains. Approximately 855 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 113,439 acres mapped as forest land, of which 57,639 acres or 51 percent are mapped as productive old-growth forest. Of the productive old growth, 20,821 acres or 36 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,333 acres of high-volume, coarse-canopy old growth. There are about 661 acres of second growth resulting from beach harvest in the past and overstory removal in the 1990s.

**(d) Fish Resources:** Fish resources are considered to be of high value in the area. Harding River, Eagle River, Tom Creek, and Marten Creek are the major fish producers. Species include pink, chum, coho, chinook, and sockeye salmon, steelhead, rainbow trout, cutthroat trout, and Dolly Varden char.

**(e) Wildlife Resources:** The area supports all of the major species that inhabit the mainland portion of Southeast Alaska, including mountain goats, black and brown bears, wolves, Sitka black-tailed deer, and moose. The Harding River and Eagle River valleys support relatively high populations of brown bears. Higher volume old-growth habitats are common in the Harding River, Tom Creek, upper Marten Creek, and Hoya Creek drainages, and along the Bradfield Canal shoreline.

Based on harvest data compiled from 1985 to 1994, one of the VCUs located within this area was identified within the top 25 percent of brown bear harvest areas on the Tongass. A second VCU, located the other side of the Bradfield Canal, was identified within the third 25 percent of brown bear harvest areas (ADF&G, 1998).

**(5) Management Direction and Current Uses:** This area was allocated to nine Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These nine LUDs are Modified Landscape, Scenic Viewshed, Timber Production, Transportation and Utility System (TUS), Semi-remote Recreation, Remote Recreation, Old-growth Habitat, Scenic River, and LUD II. The TUS LUD is a secondary LUD that overlays the other land uses.

| LUD | Acres |
|---|---|
| Modified Landscape | 17,880 |
| Scenic Viewshed | 5,143 |
| Timber Production | 4,301 |
| Transportation and Utility System | NA |
| Semi-remote Recreation | 114,226 |
| Remote Recreation | 22,499 |
| Old-growth Habitat | 9,663 |
| Scenic River | 5,600 |
| LUD II | 40 |

Approximately 15 percent of the roadless area (not including the TUS LUD overlay) was allocated to a development LUDs (Modified Landscape, Scenic Viewshed, Timber Production). The Modified Landscape LUD was assigned to approximately 10 percent of the roadless area. The Modified Landscape LUD is located around the Campbell timber sale area in the north and along Bradfield Canal west of Eagle River in the south. Approximately 3 percent of the roadless area was allocated to the Scenic Viewshed LUD, along Blake Channel. In the southern part of the roadless area, the Timber Production LUD was allocated to approximately 2 percent of the area. A potential power transmission corridor is located in the southern half of the roadless area, which was designated to the Transmission and Utility LUD overlay.

Most of the roadless area, 85 percent, was allocated to a non-development LUD (Semi-remote Recreation, Remote Recreation, Old-growth Habitat, Scenic River, LUD II). Much of the roadless area, 64 percent, was allocated to the Semi-remote Recreation LUD. Land in the higher elevations of the Marten Creek drainage and near Tyee Lake was allocated to the Remote Recreation LUD. This LUD accounts for approximately 13 percent of the roadless area. The Old-growth Habitat LUD was assigned to approximately 5 percent of the roadless area. This LUD is located in two small old-growth reserves in the northwestern portion of the south half of the roadless area. A quarter-mile wide corridor of Scenic River LUD for 16 river miles along both sides of the Harding River Scenic River accounts for approximately 3 percent of the roadless area. Less than 1 percent of the roadless area was allocated to the LUD II designation, which is a part of the Anan Creek LUD II area located primarily in the Anan Roadless Area.

Adjacent to and partially within this area are the developments for the Tyee power project. This includes an underground intake, gate house, and helicopter pad at Tyee Lake, and support facilities below along saltwater. The support facilities include a powerhouse, powerlines, small dock and storage building, four houses for permanent residences, and a gravel landing strip. All of this area has been conveyed to the State of Alaska. Also nearby, are three small Forest Service administrative cabins.

In 1984, a 138 kV powerline was constructed from the Tyee power project across the part of the area along the south side of Bradfield Canal. In the 1990s, jump pools were developed on the Harding River to improve migratory access to the upper reaches.

The Record of Decision (ROD) for the Swan Lake-Lake Tyee powerline, which would connect the Tyee and Swan Lake Hydroelectric Projects, has identified the Eagle River drainage as the selected route. Project clearing started in 2002. No access roads are planned.

In the mid-1990s, the Campbell timber sale was implemented along the north side of Bradfield Canal. No roads were built, but overstory removal was conducted by helicopter on 15 units. The Record of Decision for the Canal Hoya timber sale, located on the south side of Bradfield Canal, was signed in 1999. The decision allows for construction of 6 miles of road in the Hoya Creek drainage. The sale has been sold, but no work has begun on the project yet.

Blake Channel and Bradfield Canal receive moderately-heavy use by commercial and pleasure boats. The shoreline is mostly rocky and receives little recreation use. There are two public recreation cabins on inland lakes (Eagle Lake and Marten Lake) and one at saltwater near the mouth of Harding River. There is limited subsistence use in the north half of the area by Wrangell residents, and almost no subsistence use of the south half. Outfitters and guides use the area for hunting and freshwater fishing. Wrangell residents use the area for fishing, waterfowl hunting, and brown bear hunting.

**(6) Appearance (Apparent Naturalness):** Overall, the area has moderately high scenic quality with a mostly natural appearing landscape. However, modifications have occurred at a number of sites including: the overstory removal areas from the Campbell timber sale and the small beach-logged unit along the north side of Bradfield Canal; the USGS gauging station on the Harding River; a small Forest Service administrative cabin near the Harding River gorge; the Tyee powerline along the south side of Bradfield Canal; the penstock gate house and helicopter pad at Tyee Lake; and the public recreation cabins at Eagle Lake, Harding River, and Marten Lake.

**(7) Surroundings (External Influences):** The area is part of a much larger unroaded area on Cleveland Peninsula and on the mainland stretching from the Misty Fiords National Monument south of the area, to the Skagway Juneau Icefield Roadless Area near Juneau. Boats plying the waters of Blake Channel and Bradfield Canal may be visible from within parts of the area but usually are not intrusive. Low-flying airplanes and helicopters accessing the Tyee power site or the freshwater lakes may temporarily distract visitors in the area. The development at the Tyee power site and transmission line is also readily apparent.

**(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 country may all be attractions. High quality fishing opportunities in the streams and lakes are also an attraction. The area contains 21 inventoried recreation places that cover 6,867 acres, or 4 percent of the roadless area. There are no improved trails in the area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** Changes in the boundaries between 1989 and 2003 include the exclusion of the entire Tyee powerline corridor along the south side of the Bradfield Canal and the exclusion of two small tracts of non-National Forest System land at the upper end of the Bradfield Canal. In addition, a small area north of the Tyee powerline corridor, adjacent to the Anan Roadless Area, has been excluded from the 2003 boundary because it is clearly separated from the remainder of the area.

## II. Capability of Management as Wilderness

**(1) Natural Integrity and Appearance (Apparent Naturalness):** The majority of the area is unmodified. However, the natural integrity and apparent naturalness of the area are compromised by the existing (and planned) powerline and associated hydroelectric development on the south side. This development results in water from Tyee Lake being diverted by a lake tap to a powerhouse located just outside the roadless area at the mouth of the Bradfield River. In addition, some timber harvest has occurred along the northern shore of Bradfield Canal and head of Bradfield Canal, and there is a planned timber sale in the south half. Two administrative sites exist along the Harding River; the USGS maintains a gauging station on the lower river, and the Forest Service has a small

administrative cabin adjacent to the Harding River gorge to support fisheries enhancement activities. In addition, three public recreation cabins occur in the area.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, and Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and serenity within the area. However, low-flying airplanes, traveling to the Tyee power plant or along the transmission line, to the adjacent Anan Creek Wildlife Observatory, or to a number of inland lakes, may at times pass over the area and be observed by people in this roadless area. Present recreation use levels are low except around the public recreation cabins and occasionally at the mouths of some streams. Generally, a person camped near the shoreline is likely to see others, while a person camped or traveling inland is unlikely to see others.

Because of the degree of isolation experienced by visitors and the steep terrain, visitors traveling inland have relatively good opportunities for self-reliance, adventure, and challenging experiences. The presence of both black and brown bears also presents a degree of challenge and a need for woods skills and experience; the Eagle River, Harding River, and Tom Creek valleys support high populations of brown bears.

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) | 147,235 | 82% |
| Semi-Primitive Non-Motorized (SPNM) | 15,922 | 9% |
| Semi-Primitive Motorized (SPM) | 14,365 | 8% |
| Roaded Natural (RM) | 1,814 | 1% |

The area contains 21 inventoried recreation places that cover 6,867 acres, or 4 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 7 | 3,153 |
| SPNM | 1 | 45 |
| SPM | 12 | 3,452 |
| RM | 3 | 217 |

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

There are three public recreation cabins in the area (Marten Lake, Harding River, and Eagle Lake). The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the community of Wrangell in less than 4 hours, and from Ketchikan in approximately 8 hours.

**(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 conducted by the Forest Service (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 Harding 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 20, which reflects the ongoing development and activities within the area. A separate rating was done for the portion of the roadless area that is north of Bradfield Canal, which received a rating of 22.

**(4) Ecologic and Geologic Values:** This area is part of a very extensive mainland roadless area that includes portions of western British Columbia. As such, it contributes to one of the largest areas of North America that has essentially only been affected by ecologic and geologic processes.

A little less than half of the roadless area is forested and the remainder is dominated by alpine vegetation, rock and ice/snow. Forested areas are primarily located in the Harding River, Tom Creek, Marten Creek, Hoya Creek, and Eagle River drainages, and along the beach fringe. A relatively high percentage of high-volume old growth occurs in the Harding River, Tom Creek, and Hoya Creek valleys.

**(a) Fish Resources:** VCUs 509, 511, and 519 along Marten Lake, Harding River and Eagle River were listed as primary sport fish producers. No VCUs were listed as primary salmon producers but most are secondary salmon producers (ADF&G, 1998).

Eleven ADF&G numbered salmon producing streams are present in the area. The most productive are Harding River, Eagle River, and Marten Creek. The Harding River has an average annual peak escapement of 8,200 pink, 14,000 chum, numerous coho, several hundred kings, and some steelhead. Jump pools were developed on the Harding River to improve migratory access and increase production. Eagle River has an escapement of 271,400 pink salmon, a large run of sockeye salmon, and some kings, coho, and steelhead. Eagle Lake provides habitat for sockeye salmon. Marten Creek has escapements of 11,300 pink, and a good run of steelhead. Eagle River, Harding River, Tom Creek, and Marten Creek attract local and guided steelhead fishermen.

Two relatively small streams in the northern half of the roadless area that have large amounts of habitat and high fish production are Tom and Frank Creeks. Tom Creek has high levels of sportfishing use and contains “good” to “excellent” habitat over most of its limited length for five species of salmon and steelhead. Frank Creek contains “good” fish habitat that supports steelhead and all salmon species except chinook.

In addition to the five species of anadromous salmon (pink, chum, coho, chinook, and sockeye, including resident kokanee) and steelhead, many streams within the area also support rainbow trout, cutthroat trout, and Dolly Varden char. Additionally, the fish provide a major food source for black and brown bears, river otters, eagles, and other wildlife. In addition, estuaries in the area provide important habitat for rearing for many anadromous species

**(b) Wildlife Resources:** A small population of mountain goats ranges over the higher elevations of the area, as do black and brown bears, wolves, Sitka black-tailed deer, and moose. The larger river valleys support a high population of brown bears. Based on data compiled from 1985 to 1994, VCUs 519, along Eagle River, is listed among the top 25 percent of VCUs for brown bear harvest (ADF&G, 1998). Higher volume old-growth habitats are common in the Harding River, Tom Creek, upper Marten Creek, and Hoya Creek drainages, and along the Bradfield Canal shoreline.

**(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, eight sensitive plant species are known or suspected to occur in the Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are no known karst or cave resources in the area.

**(5) Scientific and Educational Values:** There are opportunities to observe and study fish and wildlife and the various forces which formed these mountains.

**(6) Scenic Values:** The roadless area appears unmodified from Blake Channel. From Bradfield Canal, the area to the north mostly appears unmodified; however, timber harvest units from the Campbell timber sale, the small beach-logged unit, and the Forest Service cabin on the Harding River may be noticeable to some observers. Inland travelers in the north half of the roadless area may observe a small administrative cabin at the Harding River gorge and a public recreation cabin on Marten Lake. The area south of Bradfield Canal appears essentially unmodified from the Bradfield Canal, except for occasional sightings of the Tyee powerline. The powerline is more visible to recreationists in the Eagle Bay/River saltwater use area. The Forest Service cabin on Eagle Lake may be visible to some users in this area.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Blake Channel, which is used by tour ships; Bradfield Canal, a marine travel route; Harding River, which is recommended for Scenic River status; the Harding River and Eagle Bay/River saltwater use areas; the Marten and Eagle Lakes dispersed recreation areas; and the Forest Service cabins at Eagle Lake, Harding River, and Marten Lake.

Most of the roadless area, 71 percent, is inventoried in Variety Class A (possessing landscape diversity that is unique for the character type). About 18 percent of this area is inventoried in Variety Class B (possessing landscape diversity that is common for the character type) and the remaining 11 percent is inventoried in Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, 92 percent, has the Existing Visual Condition (EVC) Type I, where only ecological change has occurred. Three percent of this roadless area is EVC Type III, where changes in the landscape are noticed by the average forest visitor, but the natural appearance of the landscape remains dominant. The remaining 4 percent of the roadless area has an EVC Type IV, where alterations to the landscape are obvious but tend to blend with natural landscape features.

**(7) Social, Cultural, and Historic Values:** Limited evidence of extensive historical use of the area exists. According to Goldschmidt and Haas (1946) former Tlingit camps occurred at the mouth of Harding and Eagle Rivers. Available information indicates that some subsistence activities occur in the area, especially in the northern half and primarily by residents of Wrangell. VCU 505, along Blake Channel, was listed among the VCUs with the highest sensitivity to disturbance of subsistence areas. No VCUs were listed among the VCUs with the highest community use value (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is generally well defined by topographic features. Feasibility of management as wilderness or in a roadless condition is high on the northern side of Bradfield Canal and somewhat less on the southern side where there is an existing power transmission line and associated developments. The Swan Lake-Tyee Lake powerline would run through the Eagle River valley in the south half of the roadless area; the powerline is permitted and project clearing started in 2002. This powerline, together with the existing powerline would likely make the south half unsuitable for wilderness. In addition, the Canal Hoya timber sale is under contract and could have activities occurring in 2003.

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

**(1) Recreation, Including Tourism Potential:** There is potential for trail, shelter, and additional cabin development within the major drainages of the area. There is potential for increased use of the area for fishing and hunting mountain goats, moose, and deer. In 1996, in their comments on the 1997 Tongass Land and Resource Management Plan, the Alaska Visitor Association proposed the following developments for Marten Creek and Lake: boardwalk and paths, day use wildlife observatory with a daily capacity of 30 people, day use recreation facilities to support 100 people a day, a boat dock to support 50 people per day, a leased proprietary camp with a capacity of 15 tent platforms, and a backcountry lodge with a capacity of 150 people. In addition, the Alaska Visitor Association proposed the following developments for the Harding River: boardwalk and paths, day use wildlife observatory with a daily capacity of 50 people, day use recreation facilities to support 100 people a day, and a boat dock to support 50 people per day. In their comments, the Alaska Visitor Association also proposed the following

developments for Eagle River: boardwalk and paths, day use wildlife observatory with a daily capacity of 50 people, and day use recreation facilities to support 100 people a day.

**(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:** Channel modification was performed in the Harding River gorge in the late 1990s. Three jump pools were excavated. Feasibility studies for fisheries enhancement continue in this area. Plans to enhance Eagle Lake and River were halted in deference to a concern from ADF&G, Sport Fish Division regarding potential significant adverse effects on the existing trophy cutthroat population in Eagle Lake. Planning was discontinued in the early 1990s. At that time, investigators believed that the highest production would come from a combination of coho and sockeye as the target species.

**(4) Wildlife Resources:** Moose habitat improvement projects have been planned in the area. These projects typically consist of thinning, slashing, pruning and planting for preferred browse species.

**(5) Timber Resources:** There are approximately 57,639 acres mapped as productive old growth in the roadless area. In addition, 661 acres mapped as second growth have resulted from timber harvest. Of these acres, 22,200 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), 3,165 acres, or 2 percent of this roadless area are estimated to be suitable for timber production. Approximately 1,077 of the suitable acres are mapped as high-volume old growth; of these acres, 66 are mapped as high-volume, coarse-canopy old growth.

The LUDs identified for this roadless area under the current Forest Plan, permit timber harvest in a portion of the area along Blake Channel and along most of both shorelines of Bradfield Canal. In addition, much of the western portion of the southern half of the roadless area consists of LUDs permitting timber harvest. The Record of Decision for the Canal Hoya timber sale, which is located in this area, was signed in 1998, but has not yet been implemented. The potential for managing timber in this roadless area is dependent on market values and the development of harvest methods that will allow extraction without need for extensive roading. It may also require additional 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; there are no known epidemic disease occurrences.

**(7) Minerals:** There are no known current claims in this area. The roadless area contains an estimated 89,090 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 233 of these acres are considered to have high potential for development and the balance is classified as low potential. Some past exploration and development of an asbestos claim occurred on the north side of the area in an area called Miners Creek. The south side has an adit (horizontal tunnel) located west of Eagle Bay.

**(8) Transportation and Utilities:** No roads or other facilities were constructed on the north shore of Bradfield Canal for the Campbell timber sale. The State of Alaska commissioned the McDowell Group to conduct a Benefit/Cost Study for a proposed Ketchikan/Bradfield/Cassiar Transportation Corridor in 1994, which considered a road route along the Swan-Tyee intertie corridor. There are currently no plans to construct this road. However, a shoreline route from Wrangell to the Bradfield is included as a route for consideration by Southeast Conference in their ongoing assessment of long-term transportation needs for Southeast Alaska. This route passes through the northern portion of the roadless area along the Bradfield Canal.

The Record of Decision for a proposal to connect electricity generation sites and communities together in Southeast Alaska has identified the Eagle River drainage as the selected route for a transmission line to connect the Tyee and Swan Lake hydroelectric power plants and their transmission facilities together. Project clearing started in 2002. No access roads are planned, but this line would affect one currently unroaded drainage within this roadless area. In addition, roads and a log transfer facility are planned for development under the Canal Hoya timber sale on the south side of Bradfield Canal. These are planned for construction to possibly begin in 2003.

**(9) Water Availability and Use:** The Tyee hydroelectric project is located adjacent to and partially within this area. This project includes an underground intake, gate house, and helicopter pad at Tyee Lake, and support facilities below along saltwater. The support facilities include a powerhouse, powerlines, small dock and storage building, four houses for permanent residences, and a gravel landing strip. All of this area has been conveyed to the State. Also nearby, are three small Forest Service administrative cabins. In 1984, a 138 kV powerline was constructed from the Tyee power project across the part of the area along the south side of Bradfield Canal. A powerline corridor (for the Swan Lake-Tyee Lake powerline) runs from south to north through the south half of the area in the Eagle River valley. The project clearing started in 2002. There are no additional planned hydropower or domestic water projects in the area.

**(10) Areas of Scientific Interest:** The area contains no inventoried potential Research Natural Areas. The area has not been specifically identified for any scientific studies.

**(11) Land Use Authorizations:** A 138 kV powerline under special use permit crosses part of the area south of Bradfield Canal. The Tyee Lake drainage has been identified by the Federal Power Commission as a hydropower generation site and is withdrawn from competing management. In 1984, a tunnel was drilled from a powerhouse in the Bradfield drainage through the mountain to near the bottom of Tyee Lake to provide water for electrical generation. This and the associated developments previously described are under FERC License and are located on lands that have been conveyed to the State. A special use permit has been issued for the Swan Lake-Tyee Lake powerline, which runs up the Eagle River valley. Project clearing started in 2002.

**(12) Land Status:** The entire roadless area consists 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 commercial fishing in Bradfield Canal and Blake Channel and with sport fishing in some of the major streams in the area. There has been some interest by residents of Wrangell in limiting the number of outfitter guides in the area.

**(b) Congressional Interest:** Two bills from the U.S. House of Representatives included wilderness proposals for Southeast Alaska. In 1989, U.S. 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:** No specific recommendations for wilderness were made, but some comments called for watershed protection and managing the Harding River watershed as pristine as possible. The Wrangell Resource Council recommended that the roadless area be managed under the Primitive Recreation LUD, because it contains large old-growth blocks and outstanding recreation, subsistence, and commercial fishing values. They were specifically concerned about protecting habitat in the southern half of the roadless area and indicated that possible future development would conflict with sport fishing, charter boat, and guide services. The Ketchikan Gateway Borough and the City of Petersburg did not want to restrict future development of the Bradfield Canal Resource Road and the Swan Lake-Tyee Lake powerline intertie and transportation project. Comments from the timber industry recommended that the area around Marten Creek be available for unrestricted timber harvest and roading.

In 1996, in their comments on the 1997 Tongass Land and Resource Management Plan, the Alaska Visitor Association proposed the following developments for Marten Creek and Lake: boardwalk and paths, day use wildlife observatory with a daily capacity of 30 people, day use recreation facilities to support 100 people a day, a boat dock to support 50 people per day, a leased proprietary camp with a capacity of 15 tent platforms, and a backcountry lodge with a capacity of 150 people. In addition, the Alaska Visitor Association proposed the following developments for the Harding River: boardwalk and paths, day use wildlife observatory with a daily capacity of 50 people, day use recreation facilities to support 100 people a

day, and a boat dock to support 50 people per day. In their comments, the Alaska Visitor Association also proposed the following developments for Eagle River: boardwalk and paths, day use wildlife observatory with a daily capacity of 50 people, and day use recreation facilities to support 100 people a day.

Harding River and Marten Lake and Creek were identified in the September 25, 1997 appeal filed by the Narrows Conservation Coalition (NCC). This appeal identified these as areas left unprotected by the 1997 Tongass Land Management Plan that are "of very particular concern to the people in the Stikine 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:** Comments on the Campbell timber sale suggested that the Harding River/Tom Creek area has the potential to be another Anan Creek wildlife viewing area if the area is left "untouched." They also noted that roads in the Tom Creek drainage would be difficult to build and maintain because of sand deposits and would adversely affect fish habitat, goat habitat, and bear habitat.

Comments on the Canal Hoya timber sale suggested that bears and mountain goats would be adversely affected by roads and timber harvest. They stated that Anan bears are an important economic resource for the Southeast Alaska (including guided tours to view the bears) and that Anan Creek is the best, or one of the best, places to view both brown and black bears feeding on fish together. They indicated that bear populations would be adversely affected by roads and logging because the bears' home ranges extend into the roadless area. They further stated that the Eagle River area is the most important area on the mainland for hunting brown bears and that bear populations would be adversely affected by roads and logging.

A number of comments were received on the Swan Lake-Tyee Lake intertie project relative to the Harding Roadless Area. The Ketchikan Indian Corporation indicated opposition to road construction in the Eagle River valley because of the effects on fisheries and land animals and because they would encourage members of the public to compete with them for subsistence resources. The City of Ketchikan, the Ketchikan Public Utility, and others supported 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. Along with three other roadless areas that form the Cleveland Peninsula, the southern lobe of this roadless area contributes to the corridor for many mainland species to colonize the archipelago of Southeast Alaska. They indicated that protection of this area, in combination with the Aaron (#205) and North Cleveland (#529) Roadless Areas, would conserve valuable remaining undisturbed forested habitats on the mainland of 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.

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 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. SEACC recommended that the Madan, Aaron, Cone, Harding, and Bradfield complex should be considered one roadless area and should be recommended for permanent protection as LUD II.

Some individuals recommended this area for permanent protection as wilderness.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Harding Roadless Area is part of a larger mainland unroaded landmass. Adjacent roadless areas include the Aaron, Cone, Bradfield, and Anan Roadless

Areas. Misty Fiords National Monument Wilderness borders the area on the southeast and the Stikine-LeConte Wilderness is located about 10 miles to the north. The mainland areas within these roadless areas receive light use inland, away from saltwater access. The Anan Wildlife Viewing Area, adjacent to the northwestern corner of the south half of the Harding Roadless Area, receives relatively high use (some 2,000 to 3,000 people each year) for viewing wildlife, especially black and brown bears that feed on salmon in Anan Creek.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 40 | 80 |
| Wrangell (Pop. 2,308) | 15 | 25 |
| Petersburg (Pop. 3,224) | 50 | 55 |
| Juneau (Pop. 30,711) | 165 | 175 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Harding Roadless Area consists of two approximately equal portions, one north and one south of Bradfield Canal. Both halves are on the mainland. The north half is approximately 15 miles southeast of Wrangell and is bounded on the west by Blake Channel, on the south by Bradfield Canal, and on the north and east by other roadless areas. The south half is approximately 30 miles southeast of Wrangell and is bounded on the west by the Anan Creek Congressionally designated LUD II area, on the north by the Bradfield Canal, on the southeast by Misty Fiords National Monument, and by other roadless areas on the northeast and south. The area is generally characterized as highly-complex terrain dominated by rugged mountains, many of which reach elevations of over 3,000 feet. The tallest is over 4,000 feet. Between the mountains are deep, narrow valleys containing several sizable streams that ultimately feed into Blake Channel or Bradfield Canal. Dominant waterforms include a number of sizeable streams, a number of lakes, and relatively small glaciers, which occupy the highest mountains.

The Harding Roadless Area is mostly unmodified. However, a 138 kV powerline follows the south shoreline of the Bradfield Canal; water from Tyee Lake is diverted by a lake tap to a powerhouse located just outside the area at the mouth of the Bradfield River; some timber harvest has occurred along the northern shore of Bradfield Canal; timber harvest under contract in the south half; three public recreation cabins are present; and clearing for the Swan Lake-Lake Tyee powerline up the Eagle River valley was started in 2002. Overall, the natural integrity and apparent naturalness is still high for the area. If the portion of the roadless area north of the Bradfield Canal is rated separately, the natural integrity and apparent naturalness is scored very high. The opportunity for solitude and primitive recreation is high for the roadless area.

Approximately 71 percent of the landscape is considered distinctive for the character type from a scenery perspective. Relatively small glaciers occupy the highest mountains, especially in the Harding River drainage.

The roadless area includes about 20,821 acres of high-volume, old-growth forest. Of these acres, 1,333 are mapped as high-volume, coarse-canopy old growth.

Approximately 41 percent of the Harding Roadless Area, most of the northern portion, lies within the Central Coast Range Biogeographic Province and makes up about 10 percent of the province. It is one of nine inventoried roadless areas found in the province that collectively make up about 59 percent of the province. Portions of the Stikine-LeConte Wilderness lie within the Central Coast Range province and make up about 38 percent of the province. Another 41 percent, of the Harding Roadless Area, most of the southern portion, is classified as being in the North Misty Fiords Biogeographic Province and makes up about 8 percent of the province. It is one of three inventoried roadless areas found within the province that collectively make up about 16 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. Areas at the highest elevations, 15 percent of the roadless area, are part of the Icefields province and make up less than one percent of that province. A small portion, less than four percent of the roadless area, falls within the Revilla Island/Cleveland Peninsula Provinces and make up less than one percent of that province.

The Harding Roadless Area lies within three ecological sections; it represents 2 percent of the Coast Mountain Batholith Fjordlands Ecological Section, 3 percent of the Inside Passage Fjordlands Ecological Section, and 1 percent of the Boundary Ranges Ecological Section. These ecological sections are all well represented by existing wilderness (96, 20, and 33 percent, respectively) and by other existing non-development LUDs (2, 32, and 62 percent, including 0, 2, and 1 percent in LUD II, respectively).

Approximately one-third (32 percent) of this roadless area is within the Boundary Ranges Icefields Ecological Subsection; this portion of the roadless area represents 1 percent of the entire ecological subsection, which is well represented in existing wilderness (32 percent) and by other existing non-development LUDs (61 percent). Twenty-five percent of this roadless area is within the Eastern Passage Complex Ecological Subsection; this portion of the roadless area represents 18 percent of the entire ecological subsection. Approximately 23 percent of this ecological subsection is in existing wilderness, 3 percent is in existing LUD II, and an additional 29 percent is protected by other existing non-development LUDs. The Bell Island Granitics Ecological Subsection represents 25 percent of the roadless area; this portion of the roadless area represents 14 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). The remaining 18 percent of the roadless area is in the Misty Fiords Granitics Ecological Subsection; this portion of the roadless area represents 2 percent of the entire ecological subsection. This ecological subsection is well represented by existing wilderness (96 percent) and by other existing non-development LUDs (2 percent).

The Harding 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. The portion of the roadless area north of the Bradfield Canal was rated separately and received a score of 22.

There is both local and national support for management of the area in an unroaded condition, and some support for designation of the area as wilderness. Designation would create a wilderness that would tie to the Misty Fiords National Monument Wilderness in the south. The ongoing developments and activities in the middle of the roadless area, such as the power plant and powerlines would likely be inconsistent with wilderness objectives. Additionally, the Canal Hoya Timber Sale is under contract, and the construction of the powerline intertie between Swan Lake near Ketchikan and the Tyee Lake power system is permitted for construction. This power intertie is considered important to the communities of Southeast Alaska. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low to moderate, even when separability is factored in for the northern portion.

## V. Environmental Consequences

The Harding Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, 4, 5, or 7 is implemented. Approximately 85 percent of the roadless area would be managed under non-development LUDs. The development LUDs are mostly concentrated in the vicinity of the Bradfield Canal area, except for the powerline under construction through the southern portion of the roadless area. Timber harvest and road development could occur in the remaining 15 percent. The land in the development LUDs provides an estimated 3,165 acres that are suitable for timber production (4 percent of the suitable acres on the Wrangell Ranger District). Approximately 66 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains an estimated 89,090 acres of undiscovered locatable mineral resources; 233 of these acres are considered to have high potential for development and the balance is classified as low potential. The timber sales, 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 allowed by the Forest Plan, especially in the Bradfield Canal area and along the powerline corridor to the south.

Under Alternative 2, the 40 acres currently in 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 ongoing recreation, minerals, and special use programs could continue similar to current conditions in most of the roadless area. Construction of the powerline would continue. The values associated with the natural settings of the roadless area would continue to be provided long-term protection if designated wilderness.

Under Alternative 6, the entire area not currently LUD II would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. Construction of the powerline would continue. 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.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. The ongoing recreation, minerals, and special uses programs could be restricted. Timber harvest would not be allowed. The powerline under construction would continue, however, proposals to build a road connection through the southern area would not likely move forward. 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 207 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | 40 | | | | | | 179,350 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | 22,499 | 22,499 | 22,499 | 22,499 | 22,499 | | 22,499 | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | 9,663 | 9,663 | 9,663 | 9,663 | 9,663 | | 9,663 | |
| Semi-remote Recreation | 114,226 | 114,226 | 114,226 | 114,226 | 114,226 | | 114,226 | |
| Recommended LUD II | | | | | | 179,310 | | |
| LUD II | 40 | | 40 | 40 | 40 | 40 | 40 | |
| Wild, Scenic, Recreational River | 5,600 | 5,600 | 5,600 | 5,600 | 5,600 | | 5,600 | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 5,143 | 5,143 | 5,143 | 5,143 | 5,143 | 0 | 5,143 | 0 |
| Modified Landscape | 17,880 | 17,880 | 17,880 | 17,880 | 17,880 | | 17,880 | |
| Timber Production | 4,301 | 4,301 | 4,301 | 4,301 | 4,301 | | 4,301 | |
| **TOTAL** | **179,350** | **179,350** | **179,350** | **179,350** | **179,350** | **179,350** | **179,350** | **179,350** |
| Suitable Timber Lands | 3,165 | 3,165 | 3,165 | 3,165 | 3,165 | 0 | 3,165 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Bradfield (208)

**ACRES (NFS):** 204,133

**BIOGEOGRAPHIC PROVINCE:** Central Coast Range, North Misty Fiords, and Ice Fields

**ECOLOGICAL SECTION:** Boundary Ranges and Coast Mountain Batholith Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 20

### I. Overview and Description

**(1) Location and Access:** The Bradfield Roadless Area is located on the mainland approximately 25 miles southeast of Wrangell. The area is bounded on the west by the Harding Roadless Area, on the north by the Cone Roadless Area, and on the southeast and east by Misty Fiords National Monument. A small portion of the area is bounded on the northeast by the Canadian border. The area is accessible by saltwater via boat or float plane along Bradfield Canal. There is a gravel landing strip suitable for landing small wheeled aircraft near the Tyee power generation site, immediately west of the Bradfield Roadless Area. There are no lakes suitable for landing floatplanes. Access into the interior is by foot or helicopter.

**(2) History:** The area may have been used by the Tlingit in prehistoric and historic times. An aboriginal camp was formerly located on the east side of the Harding River, immediately west of the Bradfield Roadless Area (Goldschmidt and Haas, 1998). From 1966 to 1982, the Bradfield River, North Fork, and East Fork Timber Sales were logged in the Bradfield drainage. The Tyee power generation plant is located near the mouth of the Bradfield River.

**(3) Geography and Topography:** The area is generally characterized as highly-complex terrain dominated by rugged mountains, many of which reach elevations of over 4,000 feet. Between the mountains are deep, narrow valleys containing the high-energy Bradfield and White Rivers that feed the head of Bradfield Canal. Logging and road building has occurred along the north and east forks of the Bradfield River. These developed areas extend into the roadless area separating the area into three general sections. Dominant waterforms include relatively small glaciers that occupy the highest mountains, numerous streams, waterfalls, and several small cirque lakes. The lakes occupy approximately 156 acres, with ice and snow covering 35,967 acres. Rock covers approximately 69,722 acres, and alpine accounts for 2,848 acres. The area contains 16 miles of saltwater shoreline and 184 acres of islets.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is located in three biogeographic provinces: Central Coast Range, North Misty Fiords, and Ice Fields. The landscape in these provinces ranges from rugged and glaciated topography through considerable topographic relief with many glaciers to permanent icefields, active glaciers, and nunataks (mountain peaks between glaciers). This roadless area is more characteristic of the higher portion of the region but without the massive ice fields. There are no known areas of unique or uncommon plant/soils associations. There is a small undeveloped hot spring located south of the East Fork of the Bradfield River.

Ecological Section/Subsection. The Bradfield Roadless Area is predominantly within the Boundary Ranges Ecological Section (M246B) and includes a small portion within the Coast Mountain Batholith Fjordlands Ecological Section (M247K). These areas are represented by two ecological subsections (see table below). The Boundary Ranges Icefields Ecological Subsection represents the majority of the Bradfield 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. The Misty Fiords Granitics Ecological Subsection covers the remainder, approximately 10 percent, of the roadless area. It is glacially scoured, rugged granitic batholith. Soil development, and consequent forest establishment, is restricted to isolated patches in depositional zones (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Boundary Ranges | Boundary Ranges Icefields | 90% |
| Coast Mountain Batholith Fjordlands | Misty Fiords Granitics | 10% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

Estuary soils, located in the flats around the mouth of the Bradfield River, are mostly deep, wet and tend to have a basic pH due to the influence of saltwater.

**(c) Vegetation:** Alpine vegetation (mapped as 2,848 acres) dominates land above 2,500 feet elevation. Below that elevation the steep mountain sides and river floodplains are heavily forested with Sitka spruce and lesser amounts of western hemlock. The steep slopes are heavily marked with snowslide and landslide paths which are typically covered with grass, alders and willows. Stands of cottonwood are also found along the valley bottoms and floodplains. 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 66,729 acres mapped as forested land, of which 23,623 acres or 35 percent are mapped as productive old-growth forest. Of the productive old growth, 4,274 acres or 18 percent are mapped as high-volume old-growth forest. The productive old growth includes about 47 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:** Fish resources were rated by the Alaska Department of Fish and Game (ADF&G) in its Forest Habitat Integrity Program (1983). These ratings describe the value of VCUs for sport fish, commercial fish, and estuaries. The Bradfield Roadless Area encompasses six VCUs. Three of these VCUs (513, 514, and 515) on the North Fork of the Bradfield River were rated high value for both sport and commercial fish. Two of the other VCUs (516 and 517) on the East Fork of the Bradfield are rated high value for just commercial fish. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified VCU 514 as a primary sportfish producer. VCUs 512 and 516 were identified as non-producers of salmon.

The two main channels of the Bradfield River are identified by the ADF&G as important for producing salmon. The river produces coho, pink, chum, sockeye and chinook salmon, as well as steelhead and cutthroat trout, and Dolly Varden char. The river also has a spring run of eulachon (hooligan).

**(e) Wildlife Resources:** Brown bear are prevalent in the area. A small population of mountain goats ranges over the area, as do black bear, deer, wolves, and moose. Bald eagles nest in the area.

**(5) Management Direction and Current Uses:** The area was allocated to four Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These four LUDS are Timber Production, Semi-remote Recreation, Remote Recreation, and Old-growth Habitat.

| LUD | Acres |
|---|---|
| Timber Production | 119,375 |
| Semi-remote Recreation | 43,481 |
| Remote Recreation | 27,505 |
| Old-growth Habitat | 13,772 |

Approximately 58 percent of the roadless area was allocated to one development LUD, Timber Production. The Timber Production LUD is located in the most of the southern part of the roadless area. This LUD surrounds the Bradfield River drainages and extends to form the northern boundary of the Misty Fiords National Monument.

Approximately 42 percent of the roadless area was allocated to non-development LUDs (Semi-remote Recreation, Remote Recreation, Old-growth Habitat). Land northwest of the North Fork of the Bradfield River was allocated to the Semi-remote Recreation and Remote Recreation LUDs. The Semi-remote Recreation LUD was assigned to approximately 21 percent of the roadless area. Approximately 13 percent of the roadless area was allocated to the Remote Recreation LUD. The Old-Growth LUD was assigned to approximately 7 percent of the roadless area. This LUD is located in small pockets of land adjacent to the north and east forks of the Bradfield River.

The area at the head of Bradfield Canal around the power generation facility receives moderately-heavy use by people visiting and working at the site. Present recreation use levels are low except around the grassflats at the mouth of the rivers. Moderate amounts of brown bear and waterfowl hunting takes place in the lower Bradfield area. Goat hunting is popular in the higher elevations. Outfitter and guide use of the area for hunting and fishing occurs, but not every year. Limited subsistence use, including hunting and spring hooligan fishing, takes place at the head of the Bradfield Canal.

**(6) Appearance (Apparent Naturalness):** Overall, the area has high scenic quality with a natural appearing landscape and provides spectacular scenery from the Bradfield Canal, the north and east forks of the Bradfield River, and from within the area. There is an active mining claim with a small cabin located on the North Fork of the Bradfield River.

**(7) Surroundings (External Influences):** This roadless area is part of a large unroaded area that stretches from the Misty Fiords National Monument south of the area, to the Skagway Juneau Icefield Roadless Area near Juneau. Low-flying aircraft accessing the Tyee power generation site are common and may attract attention in the southwestern portion of the area. Timber harvest in the valley bottoms that extend into the roadless area is also an external influence. The remainder of the surrounding area is generally isolated.

**(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. The area contains three inventoried recreation places that cover 1,151 acres, or approximately 1 percent of the roadless area. These places are located at the head of the canal and along the north and east forks of the Bradfield River. There are no improved trails in the area. Some recreationists/hunters hike or use ATVs along the first two miles of the old roads located on state land up to the location of the first river crossing, where the bridges have been removed.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The changes in boundaries between 1989 and 2003 were the exclusion of small areas due to changes in land ownership near the mouth of the Bradfield River, and the inclusion of more area along the north and east forks of the Bradfield River.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The majority of this roadless area (85 percent) is natural appearing, with only ecological change occurring. The White River drainage, the upper elevations, and the upper reaches of both forks of the Bradfield River have not been modified. The valley bottoms and lower slopes along much of the Bradfield River have, however, been extensively roaded and timber stands have been harvested. These roads have been reclaimed in several places by the natural high energy movement of the river in its floodplain. Although the modified areas are not part of the roadless area, they extend into and are visible from the area, and affect the natural integrity and apparent naturalness. The portions of the area that are natural appearing are suitable for wilderness classification.

**(2) Opportunity for Solitude, Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and primitive recreation within the area; however, boats and low-flying airplanes traveling to the Tyee power generation site are common and may be observed by people in this roadless area. Present recreation use levels are low except around the grassflats at the mouths of the rivers. Generally, a person camped or traveling inland is unlikely to see others.

Access on land is difficult, offering a high degree of physical challenge. 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 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) | 148,534 | 73% |
| Semi-Primitive Non-Motorized (SPNM) | 30,683 | 15% |
| Semi-Primitive Motorized (SPM) | 4,670 | 2% |
| Roaded Motorized (RM) | 20,210 | 10% |

The area contains three inventoried recreation places that cover 1,151 acres, or approximately 1 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPNM | 0 | 0 |
| SPM | 1 | 976 |
| RM | 3 | 174 |

* Some Rec. Places 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 facilities in the area. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the community of Wrangell in less than 2 hours, and from Ketchikan in approximately 8 hours.

**(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 Bradfield Roadless Area was given a rating of 25 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 20. This rating reflects the degree of developments in the Bradfield drainage and the effects on the natural integrity and apparent naturalness of the area.

**(4) Ecologic and Geologic Values:** This area is part of a very extensive mainland roadless area that includes portions of western British Columbia. As such, it contributes to one of the largest areas in North America that has essentially only been affected by ecologic and geologic processes.

This roadless area is only partially forested. Lower elevation mountain sides and floodplains in the Bradfield Roadless Area are heavily forested with Sitka spruce, as well as smaller amounts of western hemlock.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment identified VCU 514, extending inland from the head of Bradfield Canal, as a primary salmon and sportfish producer. VCUs 512 and 516,, east and west of VCU 514, were identified as non-producers of salmon (ADF&G, 1998).

The ADF&G identified the two main channels of the Bradfield River as important for producing salmon. The river produces coho, pink, chum, sockeye and chinook salmon, as well as steelhead and cutthroat trout and hooligan. The tributaries north of the mainstem hold most of the steelhead spawning habitat. The mainstem below the confluence of the tributaries provides habitat to all five Pacific salmon species. This area contains high value fish habitat for spawning and access. Several commercial fisheries harvest fish from the Bradfield system. A high load of suspended sediment (glacial flour) severely reduces water clarity in the mainstem and many sidechannels.

**(b) Wildlife Resources:** Brown bear are prevalent in the area. A small population of mountain goats ranges over the area, as do black bear, moose, Sitka black-tailed deer, and wolves. Bald eagles are known to nest in the 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, eight sensitive plant species are known or suspected to occur in the Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are no known karst and cave resources in the area. There is a small, undeveloped hot spring located south of the East Fork of the Bradfield River.

**(5) Scientific and Educational Values:** There are opportunities to observe and study fish and wildlife and the various forces that formed the landscape.

**(6) Scenic Values:** The visual landscape is characterized by a highly-complex terrain dominated by rugged mountains, glaciers, and deep, narrow valleys containing the Bradfield and White Rivers. Only the Bradfield Canal marine route was identified as a Visual Priority Route or Use Area by the Forest Plan, within or adjacent to the roadless area.

The entire roadless area is inventoried Variety Class A, which possesses landscape diversity that is unique for the character type.

The majority of this roadless area, 84 percent, has an Existing Visual Condition (EVC) Type I, where only ecological change has occurred on the landscape. One percent of this roadless area is EVC Type III, where the natural appearance of the landscape remains dominant but changes in the landscape are noticed by the average forest visitor. The natural appearance of the landscape remains dominant. Eight percent of the area is in EVC Type IV, where changes in the landscape are easily noticed by the average person, but it resembles natural patterns. Seven percent has an 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 area is located approximately 25 miles southeast of Wrangell, the closest community. The area contains three inventoried recreation places. Present recreation use levels are low except around the grassflats at the mouths of the rivers. While the area has historically been used by outfitters/guides, there was no recorded outfitter/guide use in this area in 2000. Limited subsistence use, including hunting and spring hooligan fishing, takes place at the head of the Bradfield Canal. Only VCU 514 extending inland from the head of Bradfield Canal, was listed among the VCUs with highest community use value. None of the VCUs were listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The boundaries of this roadless area are well defined by topographic features that separate it from adjacent roadless areas and the Misty Fiords National Monument. The northeast boundary of the area is formed by the U.S./Canadian border. Entry into the roadless area is largely restricted to the single location at the head of Bradfield Canal or by helicopter. However, developments up the valleys may affect the manageability of the area as wilderness.

This area is part of a larger mainland unroaded area that includes the Misty Fiords National Monument to the south, the Harding Roadless Area to the west, and the Cone Roadless Area and the Canadian mountains to the north and east. The immediately surrounding lands were allocated to Remote Recreation and Wilderness LUDs. The Tyee power plant and powerline are located at the western edge of the roadless area and the powerline extends further west along the south side of the Bradfield Canal. Timber harvest has occurred further west of the area on the north side of the Bradfield Canal. The Harding River, which meets the requirements for Wild classification under the National Wild and Scenic River System, is located about two miles west of the Bradfield Roadless Area.

Timber harvest activities have occurred along the north and east forks of the Bradfield River, which extend into the roadless area. As a result, this roadless area is irregularly shaped with the harvest units that follow the drainage channels partially separating the area into three sections. Management of this area as wilderness or in an unroaded condition would require little change from current management conditions.

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

**(1) Recreation, Including Tourism Potential:** There is potential for outfitter and guide permits and for developed trails and cabins or shelters in this area. In 1996, the Alaska Visitor Association (AVA) proposed that the upper Bradfield Canal be developed for recreation facilities in their comments on the 1997 Tongass Land and Resource Management Plan. They identified the following specific facilities: trails, day use wildlife observatory with a daily capacity of 50 people, day use recreation facilities to support 100 people a day, a boat dock to support 50 people per day, and an overnight wildlife observatory to support 50 people.

**(2) Subsistence Uses:** Limited subsistence use, including hunting and spring hooligan fishing, takes place at the head of the Bradfield Canal. The existing patterns of subsistence activities in the area would not be affected by wilderness designation or management in an unroaded condition.

**(3) Fish Resource:** The Tongass Land Management Plan, amended Winter 1985-86 identifies fish habitat enhancement projects. No fish enhancement projects are planned in this area. There may be an opportunity for rehabilitation of stream channels damaged by roading and logging on the Bradfield River. Riparian thinning and modest channel restoration activities were initiated in 1996 in the North Fork and continue annually.

**(4) Wildlife Resource:** As identified in the Tongass Land Management Plan (USDA Forest Service, 1997), wildlife habitat improvement projects are planned in the area. There is potential for waterfowl enhancement and browse regeneration (willow slashing) for moose.

**(5) Timber Resources:** There are approximately 23,623 acres mapped as productive old growth and no acres are mapped as second growth due to harvest in the roadless area. Of these acres, 7,225 acres are mapped as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,999 acres, or 1 percent of this roadless area are estimated to be suitable for timber production. Approximately 528 of the suitable acres are mapped as high-volume old growth; of these acres, 23 are mapped as high-volume, coarse-canopy old growth.

The areas along the north and east forks of the Bradfield River have been extensively roaded for harvesting. The road bridges built across the rivers were washed out by high water flows or were removed following harvest activities. Because harvesting has concluded, roaded access stops at the first bridge crossing which is approximately 2 miles from saltwater. As a result, these roads do not provide access to unharvested timber in the roadless area. This unharvested timber is generally in areas where high development costs may preclude development for the immediate future.

**(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 area generally has a low minerals rating although the White River drainage is rated fairly high. The roadless area contains 1,032 acres of land identified as a mineral activity tract having a low potential for development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). In addition, the roadless area contains an estimated 34,083 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 24,027 of these acres are considered to have moderate potential for development.

There are several claims near the mouth of the Bradfield River and along the North Fork. A small cabin exists on an active mining claim on the north fork of the North Fork Bradfield River.

**(8) Transportation and Utilities:** Proposals existed for development of a 69 kV electric transmission line along the North Fork of the Bradfield River to the Canadian border in the late 1980s. This electric transmission line was intended to serve mining developments in Canada. Interest in the transmission intertie with Canada may be considered again in the future because of the Swan-Tyee Intertie which is under construction. In addition, the State of Alaska planned to assess the possibility of developing a road along the North Fork of the Bradfield River. The State has selected 5,040 acres of land at the head of Bradfield Canal to become a deep water port and community if the powerline and road to Canada are built. No development or formal development proposals were in place at the time of the 1997 Tongass Land Management Plan. The possibility of a new roadway to the Bradfield canal from the Cassier Highway in British Columbia was considered as part of the Southeast Alaska Transportation planning process. The McDowell Group completed a study of the Cassier/Bradfield/Ketchikan transportation route in 1994 for the Alaska Department of Transportation. It was also the subject of a 1998 feasibility report prepared by the U.S. Forest Service for the U.S. Senate Committee on Appropriations. This road was not, however, included in the March 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999). The Bradfield route is included as a route for consideration by Southeast Conference in their ongoing assessment of long-term transportation needs for Southeast Alaska, and would cross the eastern portion of the Cone Roadless Area.

**(9) Water Availability and Use:** There are no developed recreation or other facilities located in this area. As a result, there is no demand for water for domestic use. There are a number of rivers running through the area but no hydroelectric development has been proposed to date. The Tyee hydroelectric generation project is located at the edge of the Bradfield Roadless Area.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas. The area has not been identified for any other scientific value.

**(11) Land Use Authorizations:** A support camp and a power generating plant, which uses water from Tyee Lake, are under Federal Energy Regulatory Commission (FERC) license near the head of Bradfield Canal. These land uses are located just west of the boundaries of the Bradfield Roadless Area.

Authorization was given for development of a 69 KV electric transmission line along the North Fork of the Bradfield River to the Canadian border in the late 1980s. This electric transmission line was intended to serve mining developments in Canada. No development or formal development proposals were in place at the time of the 1997 Tongass Land Management Plan, and the permit for the transmission line has terminated.

**(12) Land Status:** All land within this roadless area is National Forest System land. The Bradfield Canal (4,090 acres) and Tyee Lake (950 acres) State lands are located just on the western edge of the roadless area, and have resulted in a modified roadless area boundary.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Most use of the general area is associated with the Tyee power generation site, located west of the Bradfield Roadless Area and with brown bear, moose, and waterfowl hunting. Interest in developing potential road access to Canada through this area was expressed in the late 1980s by the Alaska State government. This potential project was not included in the March 1999 Southeast Alaska Transportation Plan.

**(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 Bradfield Roadless Area. In 2001, HR 2908 did not propose the area for wilderness, but did propose that it 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. A number of comments received during the Forest Plan revision and appeals referred to the general Bradfield Canal area.

In 1996 the Alaska Visitor Association proposed that the upper Bradfield Canal be developed with the following recreation facilities: trails, day use wildlife observatory with a daily capacity of 50 people, day use recreation facilities to support 100 people a day, boat dock to support 50 people per day, and an overnight wildlife observatory to support 50 people. The City of Petersburg and Ketchikan Gateway Borough requested that future development of the Bradfield Canal resource road and the Tyee Lake/Swan Lake Power Intertie and Transportation Project not be restricted. The Narrows Conservation Council opposed development of the Bradfield Road. The Wrangell Resource Council (WRC) requested that road construction and mineral development be prohibited in the area.

These comments refer to the general vicinity of the Bradfield Roadless Area but not necessarily the area itself. None of these comments specifically request that the roadless area or the general vicinity be designated as wilderness. The Wrangell Resources Council did, however, propose that the area be maintained in an unroaded condition.

**(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review:** The Southeast Alaska Conservation Council stated that the roadless conservation rule would block “harmful” road development in the Bradfield Canal area. 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:** 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 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. SEACC recommended that the Madan, Aaron, Cone, Harding, and Bradfield complex should be considered one roadless area and should be recommended for permanent protection as LUD II.

One individual called for long-term protection of this area.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Bradfield Roadless Area is part of a larger mainland unroaded land mass located between the Stikine-LeConte Wilderness to the northwest, the roadless Canadian mountains to the north, and Misty Fiords National Monument on the southeast. The mainland areas receive light use inland away from saltwater access.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 45 | 100 |
| Wrangell (Pop. 2,308) | 25 | 50 |
| Petersburg (Pop. 3,224) | 60 | 80 |
| Juneau (Pop. 30,711) | 170 | 200 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Bradfield Roadless Area is located on the mainland approximately 25 miles southeast of Wrangell. The area is bounded on the west by the Harding Roadless Area, on the north by the Cone Roadless Area, and on the southeast and east by Misty Fiords National Monument. A small portion of the area is bounded on the northeast by the Canadian border. The roadless area is generally characterized as highly-complex terrain dominated by rugged mountains, many of which reach elevations of over 4,000 feet. Between the mountains are deep, narrow valleys containing the high-energy Bradfield and White Rivers that feed the head of the Bradfield Canal. Dominant waterforms include relatively small glaciers that occupy the highest mountains, numerous streams, waterfalls, and several small cirque lakes.

The roadless area itself is mostly unmodified, however it is influenced by the developments up the main drainages. The area has high natural integrity and moderate apparent naturalness. The opportunity for solitude is high, and the opportunity for primitive recreation is very high.

The roadless area has very high scenic quality; nearly all the landscape is considered distinctive or unique from a scenery standpoint. The area has small glaciers that occupy the highest mountains, numerous streams, waterfalls, and several small cirque lakes.

The roadless area includes about 4,274 acres of high-volume, old-growth forest. Of these acres, 47 are mapped as high-volume, coarse-canopy old growth.

Most of the Bradfield Roadless Area (approximately 85 percent) is within the Ice Fields province and makes up about 6 percent of that province. It is one of nine inventoried roadless areas found in the province that collectively make up about 79 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. About 7 percent of the roadless area lies within the Central Coast Range Biogeographic Province and makes up about 2 percent of the province. It is one of nine inventoried roadless areas found in the province that collectively make up about 59 percent of the province. Portions of the Stikine-LeConte Wilderness lie within the Central Coast Range province and make up about 38 percent of the province. The remaining 8 percent of the

Bradfield Roadless Area is classified as being in the North Misty Fiords Biogeographic Province and makes up about 2 percent of the province. It is one of three inventoried roadless areas found within the province that collectively make up about 16 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 Bradfield Roadless Area lies within two ecological sections; it represents 1 percent of the Coast Mountain Batholith Fjordlands Ecological Section and 4 percent of the Boundary Ranges Ecological Section. These ecological sections are all well represented by existing wilderness (96 and 33 percent, respectively) and by other existing non-development LUDs (2 and 62 percent, respectively, including 1 percent in LUD II in Boundary Ranges Ecological Section).

Ninety percent of this roadless area is within the Boundary Ranges Icefields Ecological Subsection; this portion of the roadless area represents 4 percent of the entire ecological subsection, which is well represented in existing wilderness (32 percent) and by other existing non-development LUDs (61 percent). The remaining 10 percent of the roadless area is in the Misty Fiords Granitics Ecological Subsection; this portion of the roadless area represents 1 percent of the entire ecological subsection. This ecological subsection is well represented by existing wilderness (96 percent) and by other existing non-development LUDs (2 percent).

The Bradfield 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 some local and national support for managing the roadless area in an unroaded condition, and there is very little support for designation of the area as wilderness. Designation would create a wilderness that has very high scenic qualities and could add to the size of the Misty Fiords National Monument Wilderness. The area has been the center of various proposals and studies for road and power intertie connections between Southeast Alaska and the Cassier Highway in British Columbia. 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 Bradfield Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 implemented. The highly scenic areas of the area would not be affected. 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, although most potential development is in the vicinity of previous developments. The land in the development LUDs provides an estimated 1,999 acres that are suitable for timber production (2 percent of the suitable acres on the Wrangell Ranger District). Approximately 23 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains approximately 1,032 acres of land identified as a mineral activity tract having a low potential for experiencing mineral exploration and development of locatable mineral. In addition, the roadless area contains an estimated 34,083 acres of undiscovered locatable mineral resources; 24,027 of these acres are considered to have moderate potential for development. The timber sales, recreation, minerals, and special use programs would continue. Considerations for access between Southeast Alaska and Canada would continue. The values associated with the natural settings of the roadless area could be affected by developments allowed by the Forest Plan, mostly in the vicinity of the currently developed areas.

Under Alternative 6, the entire area would be converted to Recommended LUD II. Although LUD II designation would not expand the Misty Fiords National Monument Wilderness as such, it would provide for long-term management in a mostly natural condition. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. No timber harvest would be allowed. Planning for access between Canada and Southeast Alaska could 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 providing long-term protection of the wilderness related values of the area, and extend the Misty Fiords National Monument Wilderness to the north. No timber harvest would be allowed. The ongoing recreation, minerals, and special uses programs could be restricted. Planning for access between Canada and Southeast Alaska may not be allowed. 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 208 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| **Recommended Wilderness** | | | | | | | | 204,133 |
| **Wilderness** | | | | | | | | |
| **Recommended Wilderness Nat. Mon.** | | | | | | | | |
| **Wilderness National Monument** | | | | | | | | |
| **Non-wilderness National Monument** | | | | | | | | |
| **Research Natural Area** | | | | | | | | |
| **Special Interest Area** | | | | | | | | |
| **Remote Recreation** | 27,505 | 27,505 | 27,505 | 27,505 | 27,505 | | 27,505 | |
| **Enacted Municipal Watershed** | | | | | | | | |
| **Old-growth Habitat** | 13,772 | 13,772 | 13,772 | 13,772 | 13,772 | | 13,772 | |
| **Semi-remote Recreation** | 43,481 | 43,481 | 43,481 | 43,481 | 43,481 | | 43,481 | |
| **Recommended LUD II** | | | | | | 204,133 | | |
| **LUD II** | | | | | | | | |
| **Wild, Scenic, Recreational River** | | | | | | | | |
| **Experimental Forest** | | | | | | | | |
| **Scenic Viewshed** | | | | | | | | |
| **Modified Landscape** | | | | | | | | |
| **Timber Production** | 119,375 | 119,375 | 119,375 | 119,375 | 119,375 | | 119,375 | |
| **TOTAL** | **204,133** | **204,133** | **204,133** | **204,133** | **204,133** | **204,133** | **204,133** | **204,133** |
| **Suitable Timber Lands** | 1,999 | 1,999 | 1,999 | 1,999 | 1,999 | 0 | 1,999 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Anan (209)

**ACRES (NFS):** 38,162

**BIOGEOGRAPHIC PROVINCE:** Revilla Island/Cleveland Peninsula

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 22

### I. Overview and Description

**(1) Location and Access:** The area is located 25 miles southeast of Wrangell on the mainland (at the north end of the Cleveland Peninsula) and is bounded on the east by the Harding Roadless Area (207), on the west by the Frosty Roadless Area (210), on the south and southeast by North Cleveland Roadless Area (529), and on the north by Ernest Sound. The area is accessible by saltwater along Ernest Sound and Bradfield Canal. Floatplanes can land on Anan and Boulder Lakes, as well as other lakes within the area. Access to other portions of the roadless area is by foot or helicopter. There are no sites suitable for landing small wheeled aircraft.

**(2) History:** The area was inhabited by the Tlingit in prehistoric times. The mouth of Anan Creek and lagoon area were particularly important as a seasonal fish camp. Several Tlingit groups were able to use the site due to the abundant pink salmon run. More recent history includes construction of a trail in 1901 by the Sailor Fish Packing Company to support salmon harvesting activities, and a fish packing site in the lagoon area, run by the Alaska Packers Association. Several cultural sites are known and documented. In 1984, a 138 KV power transmission line was constructed along the northeast edge of the area. The strong salmon runs have been an important commercial resource. Fish enhancement and recreation facilities have been developed in the area.

**(3) Geography and Topography:** The area is generally characterized as complex terrain, dominated by rounded mountains and hills, many of which reach elevations of over 2,000 feet. The tallest is over 3,000 feet. Between the mountains are deep, narrow valleys containing two forks of Anan Creek and two long, narrow lakes. Several smaller lakes exist near the headwaters and numerous small cirque lakes occur in the alpine. These lakes total approximately 1,471 acres. About 346 acres are classified as alpine, and 2,072 acres as rock. The area contains 6 miles of saltwater shoreline and it does not include islands.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Revilla Island/Cleveland Peninsula Biogeographic Province. The province has a varied climate, with warmer and wetter conditions near the outer coast and much colder conditions near the mainland. This roadless area represents the colder portion of the province. It has relatively low, rounded landforms. There are no known areas of unique or uncommon plant/soils associations.

Ecological Section/Subsection. The Anan Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), represented by two ecological subsections (see table below). The Bell Island Granitics Ecological Subsection covers the majority of the Anan Roadless Area and is characterized by rounded hills and narrow, glacially scoured valleys. Well-drained, mineral soil is found on mountains, while poorly drained soils occupy lowlands, lake margins, and wetlands. The Eastern Passage Complex Ecological Subsection covers the remainder, approximately19 percent, of the roadless area. Lying west of the Coast Range megalignment from Bradfield Canal to Thomas Bay, the geology of the Eastern Passage Complex Ecological Subsection is rugged sedimentary and volcanic formations, dissected by numerous streams. Mineral soils, of sedimentary and plutonic origin predominate, with

organic soils relatively common on poorly drained sites. Productive hemlock and hemlock-spruce forests cover the majority of the subsection with the remainder in alpine vegetation (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Bell Island Granitics | 81% |
| | Eastern Passage Complex | 19% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less-sloping areas or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby, forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky. Estuary soils are found within the Anan Bay Lagoon area.

**(c) Vegetation:** Alpine vegetation (mapped as 346 acres) dominates above 2,500 feet elevations. Below that elevation, there are extensive areas of muskeg and scrub lodgepole pine. 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. Hillsides and steeper slopes with better drainage are heavily forested with Sitka spruce and lesser amounts of western hemlock.

There are approximately 33,282 acres mapped as forest land of which 16,018 acres (48 percent) are mapped as productive old-growth forest. Of the productive old growth, 6,892 acres (43 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 41 acres of high-volume, coarse-canopy old growth. There are about 21 acres of second-growth forest mapped in this area where timber harvest has occurred in the past.

**(d) Fish Resources:** Fish resources were rated by the Alaska Department of Fish and Game (ADF&G) in its Forest Habitat Integrity Program (1983). These ratings describe the value of VCUs for sport fish, commercial fish, and estuaries. The one VCU for this area, 522, is rated high for both sport and commercial values. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed this VCU as a primary producer of pink salmon and sportfish.

Anan Creek produces the most pink salmon of any stream on the Wrangell and Petersburg Ranger Districts. Coho salmon and steelhead trout are also abundant, and the stream produces sockeye, chinook, pink, and chum salmon, as well as cutthroat trout and Dolly Varden char. The Anadromous Waters Catalogue and Atlas (ADF&G, 2000) indicates that Boulder Lake provides habitat for coho salmon and Dolly Varden char.

**(e) Wildlife Resources:** The area has the largest concentration of black bears in Southeast Alaska. Brown bears are also present, along with Sitka black-tailed deer, wolves, beaver, marten, river otter, and mountain goat. Northern goshawk, marbled murrelets, and bald eagles inhabit the area. Bald eagles nest in the area, and gulls, ravens, and crows concentrate here due to the fish runs. Moose have not been reported in this area. Well used bear trails occur throughout the area, but are noteworthy along the southern portion of the Canal Old-Growth Reserve.

**(5) Management Direction and Current Uses:** The area was allocated to three Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These three LUDs are Transportation and Utility System (TUS), LUD II, and LUD II/Wild and Scenic River. The TUS LUD is a secondary LUD that overlays the other land uses.

| LUD | Acres |
|---|---|
| Transportation and Utility Systems | NA |
| LUD II (including LUD II/Wild and Scenic River) | 38,162 |

Only one development LUD overlay was allocated to the roadless area. The Transportation and Utility Systems LUD overlay was assigned to the potential power transmission corridor that runs east to west through the center of the roadless area.

In 1990, the Tongass Timber Reform Act (TTRA) designated the entire Anan Roadless Area to Land Use Designation II (LUD II) to be managed for primitive and semi-primitive roadless recreation. In the 1997 Tongass Land and Resource Management Plan, Anan Creek (including Anan and Boulder Lake) and its East Fork were also allocated to the LUD II/Wild and Scenic River LUD. This accounts for approximately 19 percent of the roadless area and is managed under both LUD II and Wild and Scenic River. The LUD II/Wild and Scenic River LUD represents 0.5 river mile allocated as Scenic River LUD at the mouth of Anan Creek and 17.5 river miles allocated as Wild River LUD; these will be recommended for inclusion in the national Wild and Scenic Rivers System.

The area at the mouth of Anan Creek receives heavy use by people who come to fish, and observe the wildlife. An anchorage, frequently used by outfitters/guides, is found off the mouth of the creek. The Anan Creek drainage within 1 mile of Anan Creek downstream from the mouth of Anan Lake, including the area within a 1-mile radius from the mouth of Anan Creek Lagoon, is closed to taking black and brown bear. In the area near the mouth of Anan Creek, there is one public recreation cabin, an administrative site for seasonal interpreters, and a wildlife observatory deck and shelter. The trail from the recreation cabin to the observatory is approximately 1 mile in length and receives annual maintenance due to the high concentration of visitors in the summer season. Approximately 2,500 people visit the site from late June to early September every year to view the wildlife in the area. Nineteen outfitter/guides used the roadless area in 2000, for a total of 829 service days. There is also a public recreation cabin at Anan Lake, which is accessible only by float plane. Visitors using the Anan Lake Cabin do not have access to the more developed site at the mouth of Anan Creek.

Salmon have been gathered from this area for subsistence use in the past. A fish ladder in a tunnel beneath the wildlife observatory is managed by the ADF&G. Sealaska Corporation owns two small parcels near the mouth of Anan Creek. These are managed for cultural purposes; no timber harvest is permitted.

**(6) Appearance (Apparent Naturalness):** Most of the area appears natural and unmodified. However, the area at the mouth of Anan Creek contains cabins, a mooring float in Anan Bay, a trail, a wildlife observatory deck, and a fishpass. A public recreation cabin is also located at Anan Lake. All facilities are constructed of natural materials, blending well with the surroundings. A 138 KV power transmission line was constructed along the northern eastern edge of the area, affecting the naturalness of that portion of the roadless area, especially to people entering the area from Ernest Sound and Bradfield Canal.

**(7) Surroundings (External Influences):** The area is part of a much larger unroaded area on the Cleveland Peninsula and the mainland. Inventoried Roadless Areas border three sides of this area, with the Bradfield Canal to the north. Low-flying aircraft accessing the Tyee power site, or landing on one of the lakes or in the outer bay, are not uncommon. Boats passing close by or anchored in Anan Bay may also be observed by users near the mouth of the creek. The powerline runs east through the northeastern corner of the area and into Roadless Area 207, directly to the east. Sealaska Corporation owns two small parcels near the mouth of Anan Creek. These are managed for cultural purposes. No timber harvest is allowed. The State manages the fishpass and cooperates with the Forest Service in providing for public viewing.

**(8) Attractions and Features of Special Interest:** Many attractions and features are present. They include the opportunity to fish for, and observe, pink salmon and steelhead moving over a waterfall; observing black bears, eagles, gulls, seals, and occasional brown bears feeding on the salmon; hiking the trails; enjoying the scenery; and overnighting in the cabin. The Forest Service constructed a stairway from the wildlife deck to a platform, originally part of the State's fishpass structure, in 1999. The State has allowed a viewing blind to be constructed on the

fishpass platform at the creek's edge to enhance wildlife viewing opportunities. The area contains four inventoried recreation places that cover 3,025 acres, or 8 percent of the roadless area.

The large salmon runs attract the concentrations of black and brown bear and other wildlife, which in turn contribute highly to its recreation values. Commercial guides are allowed to provide up to 1,200 service days per year for public viewing at the lower falls. Non-commercial visitors are not limited at this time. Total visitor use is approximately 2,500 during the time the site is staffed by Forest Service interpreters (late June through early September). Site use outside the staffed season is not recorded, but presumed to be low. A Forest Order is in effect between June 15 and September 15 annually, which prohibits dogs, food, and camping during this time and requires visitors to stay on the main trail between the public recreation cabin and the observatory deck. No visits are allowed to the upper falls during this time.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** A small area north of the powerline, as well as, the area within the powerline right-of-way, were part of the original roadless area. The boundary is now the southern limit of the right-of-way. Dropping the powerline from the roadless area enhances the suitability of the remaining area for wilderness. There have been no other boundary changes since the 1989 analysis.

## II. Capability of Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** Except for the developed visitor and administrative facilities, the fishpass at the falls near saltwater, and the cabin site at Anan Lake, the area has not been modified. Continued public demand will likely decrease the high degree of natural integrity in the area between the lagoon and the lower falls. The roadless area is part of a larger roadless area, which is adjacent to the Misty Fiords National Monument Wilderness. The area's appearance contributes to its suitability for wilderness classification.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is low opportunity for solitude in the bay. Opportunity increases as one moves away from the mouth of the creek, or in the off season. Boats or airplanes entering Anan Bay or airplanes landing on the lakes may commonly be observed by people in this roadless area, but such influences are not widespread. Because of the large expanse of adjacent roadless areas, the Anan Roadless Area still offers very high opportunities for solitude and primitive recreation. Present recreation use levels are low except around the mouth of the creek and at the cabin, which has high use. 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 the sights and sounds of human activity. The area is accessible by boat from the community of Wrangell in less than 2 hours, and from Ketchikan in approximately 6 hours. Because floatplanes can access a number of lakes inside the area, it is not as remote as some nearby areas.

Travel on land is difficult, offering a high degree of physical challenge. 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 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) | 33,783 | 89% |
| Semi-Primitive Non-Motorized (SPNM) | 2,861 | 7% |
| Semi-Primitive Motorized (SPM) | 1,358 | 4% |
| Roaded Modified (RM) | 113 | 0% |

The area contains four inventoried recreation places that cover 3,025 acres, or 8 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 2 | 1,970 |
| SPNM | 1 | 648 |
| SPM | 1 | 390 |
| RM | 1 | 17 |

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

The area at the mouth of Anan Creek receives heavy use by people who come to fish and observe the wildlife. An anchorage, frequently used by outfitter guides, is found off the mouth of the creek. Nineteen outfitter/guides used the area in 2000. The recreation cabins, wildlife observatory, and trails have been improved and provide access within 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 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 Anan Roadless Area was given a rating of 23 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 degree of developments for wildlife viewing and recreation use in the area.

**(4) Ecologic and Geologic Values:**

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed this VCU (522) as a primary producer of salmon and sport fish.

Anan Creek has been identified as one of the highest value freshwater habitats in the Wrangell Ranger District. Anan Creek produces the most pink salmon of any stream on the Wrangell and Petersburg Ranger Districts and is considered world class in terms of pink salmon production. Average annual peak escapement is 159,000. Coho salmon and steelhead trout are also abundant, and the stream produces all five species of Pacific salmon, as well as cutthroat trout and Dolly Varden char. Anan Creek has increased in popularity with sport fishermen. There are Forest Service recreation cabins at Anan Bay and Anan Lake. The State of Alaska constructed a fish pass to help pink salmon over a partial barrier, but it has not been in use for many years. This creek is listed by the ADF&G as one of 19 High Quality watersheds in Southeast Alaska. Information from the Anadromous Waters Catalogue and Atlas (ADF&G, 2000) indicates that coho salmon and Dolly Varden char inhabit Boulder Lake.

**(b) Wildlife Resources:** The area has the largest concentration of black bears in Southeast Alaska. Brown bears are also present, along with Sitka black-tailed deer, wolves, marten, river otter, and mountain goat. Beaver are also abundant and a series of beaver ponds and channels are found above the falls of Anan Creek. Northern goshawk and marbled murrelets may be found here. In 1989, nine bald eagle nests were mapped in the area, and gulls, ravens, and crows concentrate here due to the fish runs. Information from the Canal Hoya Timber Sale EIS (USDA Forest Service, 1998) indicated high levels of use by many old-growth dependent species. Moose have not been reported from this area. Mountain goats are hunted in the Anan and Boulder Lakes vicinity.

The beach fringe is believed to be an important east-west travel corridor and is marked by extensive game trails. Well-used bear trails occur throughout the area but are noteworthy along the southern portion of the Canal Old-Growth Reserve. A low elevation, partially forested pass extends from Upper Hoya, through the Canal VCU and to the upper East Fork of Anan 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. Goshawks have been seen in this roadless area. In addition, eight sensitive plant species are known or suspected to occur in the Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are no karst or cave resources in this roadless area. There are no glaciers in this area. A salt chuck is present at the mouth of Anan Creek.

**(5) Scientific and Educational Values:** There are numerous opportunities to observe and study fish and wildlife, all within a small, easily-accessible area. Approximately 3,000 people visit the area each year. The pink salmon run is the largest run of pinks in any river on the Wrangell and Petersburg Ranger Districts.

**(6) Scenic Values:** Most of the area appears natural and unmodified. However, the area at the mouth of Anan Creek contains cabins, trails, a wildlife observatory, and fishpass. All facilities are constructed of natural materials, blending well with the surroundings. A mooring float for the Anan Bay public recreation cabin is also located within Anan Bay. The scale and concentration of the facilities reduces the natural character of the Anan Bay area. A cabin site is also located at Anan Lake. A 138 KV power transmission line crosses the northernmost edge of the area and is not evident to the visitor except at its marine terminus located at the water's edge. At this point, the powerline is evident as one approaches the bay from the north.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Bradfield Canal and Ernest Sound, both marine travel routes; Anan Bay, a saltwater use area and boat anchorage; Anan Bay and Anan Lake Forest Service Cabins; Anan Bay Hiking Trails #448 and #557; Anan Creek, which is recommended as a Wild (17.5 miles) and Scenic (0.5 mile) River; and Anan and Boulder Lakes, for dispersed recreation.

About 23 percent of this roadless area is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type). Twenty-nine percent of the area is inventoried as Variety Class B (possessing landscape diversity that is common for the character type) and the remaining 48 percent is inventoried as Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, 98 percent, has an Existing Visual Condition (EVC) Type I, where only ecological change appears to have occurred on the landscape. One percent of the area has an EVC Type III, where changes in the landscape are noticed by the average forest visitor, but the natural landscape remains dominant. The remaining 1 percent of the area has an EVC IV, where alterations to the landscape are obvious but tend to blend with natural landscape features.

**(7) Social, Cultural, and Historical Values:** The roadless area is approximately 25 miles southeast of Wrangell. The area was inhabited by the Tlingit in prehistoric times. Several cultural sites are known. In 1984, a 138 KV power transmission line was constructed along the northeast edge of the area. The strong salmon runs have been an important commercial resource. Fish enhancement and recreation facilities have been developed in the area. The lower part of Anan Creek, from the lagoon to the lower falls, is a major tourist attraction, which draws visitors from throughout the world. There is limited subsistence use of the area. The VCU that covers this area was not listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas or highest community use value (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is located on the mainland and is part of a much larger roadless area. It is bounded on the east and northeast by the Harding Roadless Area (207), on the west and southwest by the Frosty Roadless Area (210), on the south and southeast by North Cleveland

Roadless Area (529), and on the north by Ernest Sound and Bradfield Canal. These areas are adjacent to other roadless areas and to the Misty Fiords National Monument Wilderness to the southwest and to the Stikine-Leconte Wilderness to the northwest. However, much of the adjacent area to the east and west is currently allocated to LUDs that allow timber harvest and road building. The Canal Hoya Final EIS authorizes road construction and timber harvest in the portion of the Harding Roadless Area found south of Bradfield Canal, which is immediately to the east of the Anan Roadless Area.

The area is well defined by topographic features. Entry into the area is largely restricted to the single location at the mouth of Anan Creek. However, there are a number of other entry opportunities by floatplane or helicopter.

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

**(1) Recreation, Including Tourism Potential:** There is potential for additional outfitter and guide permits and for developed trails and additional cabins or shelters, as well as for further improvements to existing facilities for barrier-free access. This is dependent on the level of development and recreation experience desired at the Anan Bay area. There is also potential to provide barrier-free access to the Anan Wildlife Observatory. Nineteen outfitter/guides used the roadless area in 2,000, for a total of 829 service days. This is well below the 1,200 service days per year limit for commercial use set in the Anan Standards EA and Decision Notice (1996). The non-commercial visitor numbers are not currently limited, but are also below the desired amount identified by the Decision Notice (3,000 per year).

In 1996, the Alaska Visitors Association (AVA) proposed the following recreation developments for Anan Creek: a day use wildlife observatory with capacity for 50 persons per day and an overnight wildlife observatory for 50 persons. However, monitoring indicates that more than 20 visitors at a time may reduce the number of viewable bears using the lower falls (Anan Management Standards Decision, Changed Condition Analysis, 2000).

**(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 State of Alaska constructed a fish pass below the wildlife observatory deck on Anan Creek in 1977 to help pink salmon over a partial barrier, but this pass has not been used for many years, with no plans for actual use as a fishpass structure in the future. No other fish habitat enhancements are planned.

**(4) Wildlife Resources:** No wildlife habitat improvement projects are planned in the area. Public demand to observe the black and brown bear concentrations has increased dramatically in the past few years. However, monitoring indicates that the current level of use is not adversely affecting the bears (Anan Management Standards Decision, Changed Condition Analysis, 2000).

**(5) Timber Resources:** There are approximately 16,018 acres mapped as productive old growth in the roadless area. In addition, 21 acres of second growth have resulted from beach logging. None of these acres are categorized as tentatively suitable for timber production, because of the Congressional designation of this area. Thus, no timber sale projects are planned for 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:** The roadless area contains an estimated 1,326 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 are no known mining claims in this area. Neither the U.S. Bureau of Land Management nor the USGS list this area as having potential for mineral development.

**(8) Transportation and Utilities:** The area is managed for its roadless character under the 1997 Forest Plan ROD and due to its Congressional designation. No roads are planned or are likely to be planned.

**(9) Water Availability and Use:** Developed recreation and administrative facilities create water demand within this roadless area. There are no existing or planned hydroelectric or domestic water projects.

**(10) Areas of Scientific Interest:** The area contains no designated Research Natural Areas. An area was previously recommended as an "other recommended Research Natural Area," and not as a priority area.

**(11) Land Use Authorizations:** The 138 KV Tyee power transmission line crosses the northeastern edge of the area. An Alaska Native historic site has been selected in the Anan Bay area. It is managed to protect the cultural values of the site. Several outfitter guides operate frequently in the Bay area.

**(12) Land Status:** The entire 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:** Many local people from Wrangell, Petersburg, and Ketchikan visit the area during the salmon run, and often take visitors there to observe the wildlife.

**(b) Congressional Interest:** In 1990, the Anan Roadless Area was designated Land Use Designation (LUD) II in the Tongass Timber Reform Act (TTRA). In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest, including the Anan Roadless Area. The final wilderness legislation did not designate this area as wilderness but it did designate it as LUD II, to be managed in a unroaded condition. In 2001, HR 2908 did not propose this area for wilderness either, but it did propose that it remain a Congressionally Designated LUD II area to be managed in an unroaded condition.

**(c) Public Input During Forest Plan Revision and Appeals:** The Alaska Visitors Association (AVA) proposed the following recreation developments for Anan Creek: a day use wildlife observatory with capacity for 50 persons per day and an overnight wildlife observatory for 50 persons. Other comments were against roads or a transportation corridor in the 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 Forest Plan revision appeals. 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:** Anan bears are an important economic resource for Southeast Alaska (including guided tours to view the bears). Anan Creek is the best, or one of the best, places to view both brown and black bears feeding on fish together. Both populations would be adversely affected by roads and logging.

**(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 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. They also indicated that protection of this area, in combination with the Harding (#207) and North Cleveland (#529) Roadless Areas, would conserve valuable remaining undisturbed forested habitats on the mainland of southeast Alaska. Large tracts of undisturbed wilderness are necessary to support the bear densities in the region because there is a hierarchy amongst bears, and between species of bears. They commented 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 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.

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. 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 as LUD II.

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:** The Anan area is part of a larger mainland unroaded land mass that is located between the Stikine-LeConte Wilderness on the northwest, the roadless Canadian mountains to the north, and Misty Fiords National Monument on the southeast. The mainland areas receive light use inland away from saltwater access.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 40 | 75 |
| Wrangell (Pop. 2,308) | 25 | 35 |
| Petersburg (Pop. 3,224) | 60 | 65 |
| Juneau (Pop. 30,711) | 175 | 185 |

Wrangell is the nearest stop on the Alaska Marine Highway and the "gateway" to this area.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Anan Roadless Area is located 25 miles southeast of Wrangell on the mainland (at the north end of the Cleveland Peninsula), and is bounded on the east by the Harding Roadless Area (207), on the west by the Frosty Roadless Area (210), on the south and southeast by North Cleveland Roadless Area (529), and on the north by Ernest Sound. The area is generally characterized as complex terrain, dominated by rounded mountains and hills, many of which reach elevations of over 2,000 feet. The tallest is over 3,000 feet. Between the mountains are deep, narrow valleys containing two forks of Anan Creek and two long, narrow lakes. Several smaller lakes exist near the headwaters and numerous small cirque lakes occur in the alpine.

The roadless area is mostly unmodified; however, it is influenced by the developments associated with Anan Bay and the Anan Wildlife Observatory and their very high recreation uses. The area has high natural integrity and apparent naturalness. The opportunity for solitude and primitive recreation is rated very high, especially when one is away from the Anan Bay area.

Approximately 23 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The lower part of Anan Creek, from the lagoon to the lower falls, is a major tourist attraction, which draws visitors from throughout the world. The primary attraction here is to observe the high concentration of black and brown bears feeding on the large runs of fish. The salt chuck at Anan Bay also provides rich fish and wildlife habitats. This roadless area was designated by Congress as LUD II in 1990.

The roadless area includes about 6,892 acres of high-volume, old-growth forest. Of these acres, 41 are mapped as high-volume, coarse-canopy old growth.

The Anan 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 that collectively 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 Congressional designated LUD II areas (Naha and Anan) which make up about 5 percent of the province.

The Anan 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, with an additional 2 percent in existing LUD II and 30 percent is protected by other existing non-development LUDs.

The majority (81 percent) of the roadless area is in the Bell Island Granitics Ecological Subsection; this portion of the roadless area represents 9 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). The balance (19 percent) of this roadless area is within the Eastern Passage Complex Ecological Subsection; this portion of the roadless area represents 3 percent of the entire ecological subsection. Approximately 23 percent of this ecological subsection is in existing wilderness, 3 percent is in existing LUD II, and an additional 29 percent is protected by other existing non-development LUDs.

The Anan 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 considerable local and national support for management of the area in an unroaded condition, but little support for designation of the area as wilderness. Designation would create a wilderness that includes the Anan Observatory and the high visitor use associated with it. This level of use would not likely be consistent with wilderness objectives. 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 Anan Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, 4, or 6 is implemented. All of the roadless area would be managed under LUD II, a non-development LUD, which provides long-term protection of the natural setting related values of the area while allowing compatible recreation uses. The roadless area contains an estimated 1,326 acres of undiscovered locatable mineral resources; all of these acres are considered to have low potential for development. The recreation, minerals, and special use programs would continue.

Under Alternative 2, 5, 7, or 8, the entire area would be converted to Recommended Wilderness, which would provide long-term protection of the natural setting related values of the area. The ongoing recreation, minerals, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 209 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | 38,162 | | | 38,162 | | 38,162 | 38,162 |
| 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 | | | | | | | | |
| LUD II | 38,162 | | 38,162 | 38,162 | | 38,162 | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | | | | | | | | |
| **TOTAL** | **38,162** | **38,162** | **38,162** | **38,162** | **38,162** | **38,162** | **38,162** | **38,162** |
| **Suitable Timber Lands** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Frosty (210)

**ACRES (NFS):** 45,522

**BIOGEOGRAPHIC PROVINCE:** Revilla Island/Cleveland Peninsula

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 19 (24, 21)

### I. Overview and Description

**(1) Location and Access:** The area is located primarily on the mainland (on the Cleveland Peninsula), but it also includes Deer Island and other small, nearby islands. It is bounded on the northeast by the Anan Roadless Area (209), on the south by the Cleveland Roadless Area (528), on the southeast by North Cleveland Roadless Area (529), and on the west by Ernest Sound and Seward Passage. The area is accessible by boat or floatplane from Ernest Sound. A marine access point and road system is located out of Frosty Bay in the middle of the mainland portion of the roadless area. This area of development nearly divides the roadless area into 2 pieces. There are no sites suitable for landing small, wheeled aircraft. The roadless area is approximately 25 miles from Wrangell. Access to the interior is by foot or helicopter.

**(2) History:** The area was inhabited by the Tlingit in prehistoric times. There are a number of historical sites, especially axed, marked, and stripped cedar trees. In the 1930s and 1940s there were salmon canneries located at Point Ward and in Santa Anna Inlet. A fox farm was located on the Niblak Islands. Limited timber harvest occurred along the shore beginning in 1917. Much of the early harvest was individual tree selection accessed primarily from the beach, but there were also some regeneration harvest treatments. Additional timber harvests occurred approximately 30 years ago near Frosty Bay. Portions of the Frosty Creek watershed were roaded and harvested in the early 1990s. This activity has essentially divided the roadless area into two parts (in addition to the islands).

**(3) Geography and Topography:** The area is generally characterized as complex terrain dominated by rounded mountains and hills rising steeply from saltwater. Many reach elevations of over 2,000 feet, and the tallest is approximately 3,000 feet. Between the mountains and hills are low valleys containing short streams. There are numerous small lakes in the area totaling about 802 acres. About 40 acres of this area are mapped as rock while no acres are mapped as alpine or ice or snowfield. The area contains 90 miles of saltwater shoreline and 9,558 acres of islands and islets, including the 8,296-acre Deer Island.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Revilla Island/Cleveland Peninsula Biogeographic Province. This province is generally characterized as complex terrain dominated by rounded mountains and hills, many of which reach elevations of over 2,000 feet. The tallest is over 3,000 feet. Between the mountains are deep, narrow valleys. There are no known areas of unique or uncommon plant/soils associations.

Ecological Section/Subsection. The Frosty Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E). There are two ecological subsections that each cover about half of the roadless area (see table below). The Zimovia Strait Complex Ecological Subsection is typified by broad glacial valleys and rounded hills. 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 Bell Island Granitics Ecological Subsection 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 | Zimovia Strait Complex | 55% |
| | Bell Island Granitics | 45% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby, forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet in elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Alpine vegetation dominates the few areas above 2,500 feet in elevation. Below that elevation there are minor areas of muskeg and scrub lodgepole pine. Hillsides and steeper slopes with better drainage are generally heavily forested with Sitka spruce and western hemlock.

There are approximately 43,397 acres mapped as forest land of which 20,771 acres or 48 percent are mapped as productive old-growth forest. Of the productive old growth, 5,785 acres or 28 percent are mapped as high-volume old-growth forest. The productive old growth includes about 85 acres of high-volume, coarse-canopy old growth. There are about 1,906 acres of second-growth forest where timber harvest has occurred in the past.

**(d) Fish Resources:** Fish resources were rated by the Alaska Department of Fish and Game (ADF&G, 1983) in its Forest Habitat Integrity Program. These ratings describe the value of VCUs for sport fish, commercial fish, and estuaries. VCU 526 is rated as high value for sport fish. The one VCU rated as highly valued for commercial fish is 523. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCU 523 as a non-producer of pink salmon and VCUs 524 and 526 as secondary producers.

Four ADF&G numbered fish streams are present. The largest producers are Sunny (June) Creek in Sunny Bay and Santa Anna (Helen) Creek in Santa Anna Inlet. Species commonly found in this area are pink, chum, and coho salmon, steelhead and cutthroat trout. The Anadromous Waters Catalogue and Atlas (ADF&G, 2000) identifies coho salmon, Dolly Varden char, and steelhead trout in Santa Anna Creek.

**(e) Wildlife Resources:** Black bears, brown bears, and wolves range over the area, as well as a small mountain goat population. Other wildlife common to the area include Sitka black-tailed deer, marten, bald eagle, and Canada goose. Geese nest in Frosty Creek, and swans winter at Helen Lake and a small lake in Frosty Creek drainage. While most of the Frosty Creek watershed is no longer part of the roadless area, the watershed is surrounded by it.

**(5) Management Direction and Current Uses:** The 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, Scenic Viewshed, Transportation and Utility System (TUS), Old-growth Habitat, Semi-remote Recreation, and Wild River. The TUS LUD is a secondary LUD that overlays the other land uses.

| LUD | Acres |
|---|---|
| Timber Production | 16,679 |
| Modified Landscape | 13,721 |
| Scenic Viewshed | 4,658 |
| Transportation and Utility System | NA |
| Old-growth Habitat | 8,400 |
| Semi-remote Recreation | 1,129 |
| Wild River | 936 |

Approximately 77 percent of the roadless area (not including the TUS LUD overlay) was allocated to a development LUD (Timber Production, Modified Landscape, Scenic Viewshed). Land along the Earnest Sound was allocated to the Scenic Viewshed LUD, which accounts for approximately 10 percent of the roadless area. The Modified Landscape LUD was assigned to approximately 30 percent of the roadless area and is located around Seward Pass and Sunny Bay and on Deer Island. The Transportation and Utility Systems LUD overlay was assigned to the potential power transmission corridor that runs through the roadless area.

Approximately 23 percent of the roadless area was allocated to non-development LUDs. The Old-growth Habitat LUD was allocated to approximately 18 percent of the roadless area. Pockets of land in the Old-growth Habitat LUD are located around Santa Anna Inlet, west Deer Island, and the central portion of the roadless area. Approximately 2 percent of the roadless area was allocated to the Semi-remote Recreation LUD, which is located on Deer and Niblack Islands. Four river miles along Santa Anna Creek and Lake Helen are allocated to the Wild River LUD, which accounts for approximately 2 percent of the roadless area.

Portions of the Frosty Creek watershed were roaded and fairly extensively harvested in the early 1990s. Ernest Sound and Seward Passage receive moderately-heavy use by recreation and commercial fishing boats. Frosty and Sunny Bays provide good anchorages. Trapping occurs along the beach fringe. There are no public recreation facilities within the roadless area and inland use is light. There is little known subsistence use in the area.

**(6) Appearance (Apparent Naturalness):** Most of the area appears natural and unmodified. However, near the mouth of Frosty Bay, areas were harvested about 50 years ago and second growth is somewhat apparent, although maturing. There are also obvious remains of the cannery in Santa Anna Inlet. Recent harvest on Deer Island and the Frosty Bay area have also affected the appearance (apparent naturalness) of the area. There is a Forest Service public recreation cabin located on Frosty Bay. A little-used float house is anchored along the west shore of Deer Island. A private special-use cabin is located on Niblack Island.

**(7) Surroundings (External Influences):** The continental portion of the area is part of a much larger roadless area on Cleveland Peninsula. Boats passing close by or anchored in one of the bays may be observed by users near saltwater. Views of timber harvest on Deer Island and near Frosty Bay may become apparent by users in some of this area.

**(8) Attractions and Features of Special Interest:** Attractions include the opportunity to view the Santa Anna Scenic River, the opportunity for secure anchorage, and the opportunity to observe remains of the old canneries. The area contains 10 inventoried recreation places that cover 5,005 acres (11 percent) of the roadless area. There are no developed recreation facilities in the roadless area. However, there is a recreation cabin with a mooring float located near the mouth of Frosty Bay.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** Deer Island and several smaller islands have been added to the roadless area. The beach fringe north of Frosty Bay, which has a string of old, beach-logged harvest units but no roads, has also been added. Due to recent timber sale activity, much of the Frosty Creek watershed has been dropped from the roadless area. The Frosty watershed is now roaded and nearly divides this roadless area in two near the upper reaches of Frosty Creek. Adjustments were also made to the boundary along the Anan Creek LUD II area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area appears to be unmodified, except for the timber harvest in Frosty Bay, Deer Island, and old harvests along the east-facing beach north of Frosty Bay, the private permitted special use cabin on Niblack Island, and the old cannery remnants. Because most of the area is in a natural and unmodified state and is part of a larger unmodified unroaded area, this area is suitable for wilderness classification. The above described developments affect the natural integrity and apparent naturalness noticeably. However, the portion of the area south of the developments associated with Frosty Bay on the mainland has outstanding natural integrity and apparent naturalness. The area north of Frosty Bay and west of the Anan Roadless Area has very high natural integrity and 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 primitive recreation within the area. Boats or airplanes passing by or entering one of the bays may be observed by people in this roadless area. Logging equipment and traffic in the Frosty Creek watershed and on Deer Island may be observed or heard, especially during periods of timber harvest. Present recreation use levels are low. Generally, a person using the area is unlikely to see others. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the community of Wrangell in less than 2 hours, and from Ketchikan in approximately 6 hours.

Travel on land is difficult, offering a high degree of physical challenge. As with all backcountry areas in 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 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) | 17,901 | 39% |
| Semi-Primitive Non-Motorized (SPNM) | 10,535 | 23% |
| Semi-Primitive Motorized (SPM) | 11,165 | 25% |
| Roaded Natural (RN) | 5,609 | 12% |

The area contains 10 inventoried recreation places that cover 5,005 acres (11 percent) of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 2 | 1 |
| SPNM | 1 | 457 |
| SPM | 6 | 2,646 |
| RM | 2 | 1,901 |

* Some Rec. Places 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).

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 Frosty

Roadless Area was given a rating of 25 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 reflects the degree of development that has occurred on Deer Island and in the Frosty Bay area. The area south of Frosty Bay and its associated developments was rated separately and received a score of 24. The area north of Frosty Bay and west of Anan Roadless Area was rated separately and received a score of 21.

**(4) Ecologic and Geologic Values:**

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list any VCUs as primary salmon or sport fish producers and listed VCU 523, on the mainland coast adjacent to Anan roadless area, as a non-producer of salmon.

Four ADF&G numbered fish streams are present. Species commonly found in this area are pink, chum, and coho salmon, steelhead and cutthroat trout. The largest producer is June Creek, with estimated annual peak escapements of 2,700 pink salmon. Generally, this area is not a major producer of anadromous fish. Lake Helen in Santa Anna Inlet is a popular sport fishing site for resident trout. Santa Anna Creek is in the same area and has high sport fish values. The Anadromous Waters Catalogue and Atlas (ADF&G, 2000) lists coho salmon, Dolly Varden char, steelhead, and cutthroat trout in the upper reaches of Santa Anna Creek, and pink and sockeye salmon present in the lower reaches of Santa Anna Creek. Santa Anna Creek and Lake Helen have "outstandingly remarkable" sport fish recreation values of regional significance due to high quality steelhead fishing and the unique low elevation lake that can be entered by boat from saltwater at high tide. Trout are also found in Standing Rock Lake, but the lake is rarely fished because access is poor.

Deer Island is not considered an important producer of commercial, sport, or subsistence fish species. There are less than 4 miles of fish-bearing streams on the island. Spawning and rearing habitat is poor due to the small size of the watersheds, steep stream gradients, large stream substrate, and lack of deep pools. The only fish observed during the Kuakan Timber Sale EIS (USDA Forest Service, 2000) survey were "trout" fry in Canyon Creek at the north end of the island.

**(b) Wildlife Resources:** Black bears, brown bears, and wolves range over the area, as well as a small mountain goat population. Other wildlife common to the area includes Sitka black-tailed deer, marten, bald eagle, and Canada geese. Sitka black-tailed deer are also present, but population numbers are relatively low. Swans winter at Helen Lake. Geese nest in Frosty Creek and swans winter in a small lake in the Frosty Creek drainage, which is a roaded area that is surrounded by the roadless area.

Information from the Kuakan Timber Sale EIS (USDA Forest Service, 2000) indicates that one goshawk nest was located on Deer Island in 1997 and 1998. The Frosty Bay EIS indicates that there are five known bald eagle nests in the area. The Frosty area also contains one of three known high density nesting sites for geese in the Wrangell district. Unlike other Canada geese which nest primarily in open wetlands, these geese nest primarily in forested areas, near open water but occasionally as far as one-half mile away.

**(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. Humpback whales and Steller sea lions are known to use the waters of Ernest Sound in the immediate vicinity of Frosty Bay and Steller sea lions have a documented haul-out on the southern tip of Deer Island. 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. Swans winter at Helen Lake and in a small lake in the Frosty Creek drainage, which is a roaded area that is surrounded by the 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. In addition, eight sensitive plant species are known or suspected to occur in the Wrangell 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 outstanding features in the area. There are numerous opportunities to observe and study fish and wildlife within an easily accessible area.

**(6) Scenic Values:** From Earnest Sound, the natural landscape continues from the adjacent roadless area. Recent logging and the log transfer facility in Frosty Bay may be noticed when traveling through Seward Passage. Views of the log transfer facility and timber harvest (cut in 1989) on the south end of Deer Island may be apparent by users in some of this area. The private permitted special use cabin on Niblack Island may be visible to travelers exploring the islands.

Visual Priority Routes and Use Areas identified by the Forest Plan for this area include: Ernest Sound, a part of the Alaska Marine Highway and tour ship route; Seward Passage, a travel route; Santa Anna Creek and Lake Helen, recommended for Scenic River designation; Frosty Bay and Sunny Bay, saltwater use areas and boat anchorages; Santa Anna Inlet, saltwater use areas; and the Frosty Bay Forest Service Public Recreation Cabin.

Four percent of this area is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type). About 50 percent is inventoried as Variety Class B (possessing landscape diversity that is common for the character type) and 45 percent is inventoried Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, 86 percent, is in Existing Visual Condition (EVC) Type I, where the landscape is natural appearing, and only ecological change has occurred. Three percent of this roadless area has an EVC Type III, where the average forest visitor notices changes in the landscape, but the natural landscape remains dominant. About 11 percent of the area has an EVC IV, where alterations to the landscape are obvious but tend to blend with natural landscape features.

**(7) Social, Cultural, and Historical Values:** The area was inhabited by the Tlingit in prehistoric times. There are a number of historical sites, especially axed, marked, and stripped cedar trees. In the 1930s and 1940s there were salmon canneries located at Point Ward and in Santa Anna Inlet. Limited timber harvest occurred along the shore beginning in 1917. Much of the early harvest was individual tree selection but there was some clearcutting.

The area includes a proposed Scenic River; the Santa Anna River and Lake. Other attractions include the opportunity for secure anchorage and the opportunity to observe remains of the old canneries. The area contains 10 inventoried recreation places totaling 5,005 acres. There are no developed recreation facilities in the roadless area. However, there is a recreation cabin near the mouth of Frosty Bay.

The area does not appear to receive heavy subsistence use. There is some subsistence bear hunting and fishing. No VCUs were listed among the VCUs with the highest community use values and two (VCUs 525 and 526, Deer Island and along the mainland coast south of Santa Anna Inlet) were listed among the VCUs with having highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

There was one outfitter/guide permit for black bear hunting issued in 2000. There were 4 service days used. There is a recreation cabin near the mouth of Frosty River. Ernest Sound and Seward Passage receive moderately-heavy use by recreation and commercial fishing boats. Frosty and Sunny Bays provide good anchorages. Trapping occurs along the beach fringe. There are no public recreation facilities and inland use is light.

**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** The roadless area is bounded on the east by the Anan Roadless Area (209), on the south by the Cleveland Roadless Area (528), on the southeast by North Cleveland Roadless Area (529), and on the west by Ernest Sound and Seward Passage. These areas are adjacent to other roadless areas and to the Misty Fiords National Monument Wilderness to the southwest and to the Stikine-Leconte Wilderness to the northwest. The saltwater boundary is well defined, but many of the drainage divides in this area are not distinct. Due to recent timber sale activity, portions of the Frosty watershed have been dropped from the roadless area. The Frosty watershed is now roaded and nearly divides this roadless area in two

near the upper reaches of Frosty Creek. This change has decreased the potential to manage the entire area as one roadless area. Much of Deer Island has been included in a timber sale that was helicopter logged and had partial harvest prescriptions. This area looks natural to most visitors and remains within the roadless area. The area south of developments associated with Frosty Bay could easily be managed as wilderness, especially if part of the larger roadless area. If the Anan Roadless Area were to be managed as wilderness, the area north of Frosty Bay could be managed with it.

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

**(1) Recreation, Including Tourism Potential:** There is potential for increased outfitter and guide permits, and for developed trails to some of the lakes. There is a recreation cabin near the mouth of Frosty River. Additional cabins or shelters are also possible.

**(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 Tongass Land Management Plan does not identify any fish habitat enhancement projects in this roadless area.

**(4) Wildlife Resources:** The Tongass Land Management Plan does not identify any wildlife habitat improvement projects in the area.

**(5) Timber Resources:** There are approximately 20,771 acres mapped as productive old growth in the roadless area. In addition, 1,906 acres mapped as second growth have resulted from beach and helicopter logging. Of this area, 13,474 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), 4,989 acres, or 11 percent of this roadless area are estimated to be suitable for timber production. Approximately 1,131 of the suitable acres are mapped as high-volume old growth; of these acres, 12 are mapped as high-volume, coarse-canopy old growth.

With an LTF and a road system in place (from the Frosty timber sale), the economics of additional timber harvest inside the roadless area and in the Frosty area may be favorable. The Kuakan Timber Sale was a helicopter partial harvest on Deer Island that was completed in 2001. The current 10-year timber action plan for the Tongass includes additional harvest in this area identified as the Pt. Warde/Frosty/Sunny Bay project.

**(6) Fire, Insects, and Disease:** The area has no significant fire history, although there is one fire-origin stand along the shore west of Sunny Bay. Endemic tree diseases common to Southeast Alaska are present; there are no known epidemic disease occurrences.

**(7) Minerals:** The area has a low minerals rating and there are no known mining claims. The roadless area contains an estimated 23,228 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:** The Transportation and Utility Systems LUD overlay was assigned to the potential power transmission corridor that runs through the roadless area. Maintaining the area as unroaded would not interfere with any planned transportation or utility corridors. The State of Alaska includes a transportation corridor between Spacious Bay south of the Frosty Roadless Area and the west side of Santa Anna Inlet.

**(9) Water Availability and Use:** There are no developed recreation facilities in the roadless area; however, there is a private permitted special-use cabin on Niblack Island. There is no demand to create a large water system, but there is domestic water use from a stream for the special-use cabin. There are no existing or planned hydroelectric or domestic water projects in the area.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas and has not been identified for any other scientific value. There are opportunities to observe and study forests, fish, wildlife, and geologic processes.

**(11) Land Use Authorizations:** There are no special uses authorized for this area. A grow-fish site has been proposed in Santa Anna Inlet.

**(12) Land Status:** This roadless area comprises all National Forest System land. The State of Alaska has included an area around Sunny Bay for potential selection, but the selection has not yet been through the approval process.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Local fishermen and Ketchikan residents traveling to Anan Creek use the waters and anchorages associated with this area. There is some subsistence, recreation, and commercial fishing in the waters near 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. This bill did not include the Frosty Roadless Area. In 2001, HR 2908 did not propose this area for wilderness, but it did propose that most of the area be classified as a Congressionally Designated LUD II area and managed in an unroaded condition. The southern portion of Deer Island was not included in the proposal.

**(c) Public Input During Forest Plan Revision and Appeals:** Some comments supported prohibiting logging in places like Frosty Bay, Santa Anna Inlet, and Deer Island. The Wrangell Resource Council was concerned that the existing deer habitat capabilities in the area were low, and wanted no additional logging because of it.

**(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 Forest Plan revision appeals. 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:** At least one commenter on the Kuakan EIS said Deer Island should remain roadless because of the island's highly visible location along a heavily used waterway.

**(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 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 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 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.

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. SEACC identified the Frosty roadless area as part of the Cleveland Peninsula, which includes Roadless Areas 209, 210, 528, and 529. They recommend this entire area as LUD II.

Many individual commenters identified the Cleveland Peninsula as an area in need of protection.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Frosty Roadless Area is part of a larger mainland unroaded land mass that is located between the Stikine-LeConte Wilderness on the northwest, the roadless Canadian mountains to the north, and Misty Fiords National Monument on the southeast. The mainland areas receive light use inland away from saltwater access. Also, the South Etolin Wilderness is directly across Ernest Sound from Deer Island, approximately 3 miles away).

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 35 | 60 |
| Wrangell (Pop. 2,308) | 25 | 30 |
| Petersburg (Pop. 3,224) | 60 | 70 |
| Juneau (Pop. 30,711) | 175 | 180 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:**
The Frosty Roadless Area is located primarily on the mainland (on the Cleveland Peninsula) but it also includes Deer Island and other small, nearby islands. It is bounded on the northeast by the Anan Roadless Area (209), on the south by the Cleveland Roadless Area (528), on the southeast by North Cleveland Roadless Area (529), and on the west by Ernest Sound and Seward Passage. The roadless area is generally characterized as complex terrain, dominated by rounded mountains and hills, many of which reach elevations of over 2,000 feet. The tallest is approximately 3,000 feet. Between the mountains are deep, narrow valleys containing two forks of Santa Anna Creek and two long, narrow lakes. Several smaller lakes exist near the headwaters and numerous small cirque lakes occur in the alpine. Several islands are also included, the largest of which is Deer Island.

The area is mostly unmodified; however, it is heavily influenced by developments in nearby Frosty Bay. Deer Island has had uneven age timber harvest with helicopters, but is natural appearing. Overall, the area has high natural integrity and moderate apparent naturalness. The area south of the Frosty Bay developments has outstanding natural integrity and apparent naturalness when rated separately. Also when rated separately, the area north of Frosty Bay and west of Anan Roadless Area has very high natural integrity and high apparent naturalness. The opportunity for solitude and primitive recreation is high for the roadless area.

Approximately 4 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The Santa Anna Creek system is allocated to the Scenic River LUD in the Forest Plan. The area has cultural and historic values associated with native cultures and historic canneries, especially in Santa Anna Bay.

The roadless area includes about 5,785 acres of high-volume, old-growth forest. Of these acres, 85 are mapped as high-volume, coarse-canopy old growth.

The Frosty 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 that collectively 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 Frosty 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 an additional 30 percent is protected by other existing non-development LUDs.

Approximately half (55 percent) of the roadless area is in the Zimovia Strait Complex Ecological Subsection; this portion of the roadless area represents 11 percent of the entire ecological subsection, 5 percent of which is in existing wilderness and 26 percent in other existing non-development LUDs. Forty-five percent of this roadless area is within the Bell Island Granitics Ecological Subsection; this portion of the roadless area represents 6 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).

The Frosty 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. A separate rating was done for the southern portion of the roadless area and received a score of 24. A rating for the area north of Frosty Bay and west of the Anan Roadless Area received a score of 21.

There is both local and national support for management of the area in an unroaded condition, but little support for designation of the area as wilderness. Designation would create a wilderness with the northern portion heavily influenced by nearby developed areas. It would include the Santa Anna recommended Scenic River system. The factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low for the whole roadless area, but moderate to high for the southern portion, and moderate for the northern portion.

## V. Environmental Consequences

The Frosty 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 in the remaining 77 percent. The land in the development LUDs provides an estimated 4,989 acres that are suitable for timber production (2 percent of the suitable acres on the Wrangell Ranger District). Approximately 12 of the suitable acres are identified as high-volume, coarse-canopy old growth. The roadless area contains an estimated 23,228 acres of undiscovered locatable mineral resources. All of these acres are considered to have low potential for development. The timber sales, recreation, minerals, and special use programs would continue. The values associated with the natural settings of the area could be affected by ongoing developments. The cultural and historic values of the area, and the Santa Anna Scenic River related values would be protected under the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use 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 the Santa Anna Scenic River related values, would be provided long-term protection if designated LUD II

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses 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, including the cultural, historic and the Santa Anna Scenic River related 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 210 (in acres) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Land Use Designation** | **Alt 1** | **Alt 2** | **Alt 3** | **Alt 4** | **Alt 5** | **Alt 6** | **Alt 7** | **Alt 8** |
| **Recommended Wilderness** | | | | | | | | 45,522 |
| **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** | 8,400 | 8,400 | 8,400 | 8,400 | 8,400 | | 8,400 | |
| **Semi-remote Recreation** | 1,129 | 1,129 | 1,129 | 1,129 | 1,129 | | 1,129 | |
| **Recommended LUD II** | | | | | | 45,522 | | |
| **LUD II** | | | | | | | | |
| **Wild, Scenic, Recreational River** | 936 | 936 | 936 | 936 | 936 | | 936 | |
| **Experimental Forest** | | | | | | | | |
| **Scenic Viewshed** | 4,658 | 4,658 | 4,658 | 4,658 | 4,658 | | 4,658 | |
| **Modified Landscape** | 13,721 | 13,721 | 13,721 | 13,721 | 13,721 | | 13,721 | |
| **Timber Production** | 16,679 | 16,679 | 16,679 | 16,679 | 16,679 | | 16,679 | |
| **TOTAL** | **45,522** | **45,522** | **45,522** | **45,522** | **45,522** | **45,522** | **45,522** | **45,522** |
| **Suitable Timber Lands** | 4,989 | 4,989 | 4,989 | 4,989 | 4,989 | 0 | 4,989 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** North Kupreanof (211)

**ACRES (NFS):** 99,566

**BIOGEOGRAPHIC PROVINCE:** Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Kupreanof Lowlands and Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 19 (22)

### I. Overview and Description

**(1) Location and Access:** The North Kupreanof Roadless Area is at the north end of Kupreanof Island and lies along the southern shore of Frederick Sound. It is accessed primarily from saltwater by boat or floatplane and from roads in the southwest and east. These roads nearly bisect the roadless area. The area is open to northeasterly winds and no sheltered anchorages are available along the shore. The closest anchorage is in Portage Bay, which provides access to the road system. Because of road development, the shore along the bay is no longer part of this roadless area.

The community of Kake lies approximately 3 miles to the west of the roadless area and the community of Petersburg, on the Alaska Marine Highway and with air service, lies 15 miles to the southeast. Logging roads connected to Kake provide access to much of the southern portion of the area. There are no sites suitable for landing wheeled aircraft or floatplanes in the interior of this area. Access into the interior is by foot or helicopter.

**(2) History:** The area lies within the traditional territory of the Kake Tlingit and is adjacent to the present community of Kake. No known significant cultural resources exist in the area. The lower reaches of Cathedral Falls Creek and Hamilton River are areas of traditional and current subsistence uses. Extensive road construction and timber harvest has occurred to the south, east, and west of the area. Sealaska Native Corporation lands to the west have had large acreages harvested for timber.

**(3) Geography and Topography:** This area consists of relatively flat terrain with many large muskeg openings. Three major watersheds, Hamilton Creek, Big Creek, and Cathedral Falls Creek drain these lowland areas. Numerous small lakes cover a total of 18 acres and the largest one is Bohemia Lake. The Bohemian Range (including Kupreanof Mountain) is located in the eastern portion of the roadless area and is the most prominent mountain feature. The range rises to an elevation of 2,200 feet, forming a ridge running in a northwest to southeast direction for approximately 10 miles. Spruce-hemlock forest covers the entire Bohemian Range, as well as the creek drainages across the lowlands. Lodgepole pine is found in the abundant mosaic of muskeg. There are no acres mapped as ice, alpine or rock. The area contains 18 miles of shoreline on saltwater. Approximately 2 acres in this area are islands and islets.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified in the Kupreanof/Mitkof Islands Biogeographic Province. This province is characterized by generally subdued, rolling topography and extensive muskeg wetlands.

Ecological Section/Subsection. The North Kupreanof Roadless Area is contained mostly within the Kupreanof Lowlands Ecological Section (M247G) and also contains portions within the Inside Passage Fjordlands Ecological Section (M247E). These sections are represented by three ecological subsections (see table below). The Duncan Canal Till Lowlands Ecological Subsection represents the majority, approximately 81 percent, of the North Kupreanof Roadless Area. The low relief, high precipitation, and

depositional soils have produced an abundance of wetlands on poorly drained sites. Productive forests are limited to slopes and riparian areas with mineral soil. The Kake Volcanics Ecological Subsection covers the remaining 18 percent of the roadless area. It contains gently rolling hills of glacially reduced sedimentary and volcanic rock, usually below 1,000 feet elevation. Productive hemlock and spruce forests are found on the slopes (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kupreanof Lowlands | Duncan Canal Till Lowlands | 81% |
| | Kake Volcanics | 18% |
| Inside Passage Fjordlands | Wrangell Narrows Metasediments | <1% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are very acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly-drained soils developed on less sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg. Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Muskeg/forested wetland timber complexes are extensive and interspersed with mature mixed conifer plant communities on better-drained sites along creeks and on steeper slopes. Approximately 13,536 acres of muskeg are mapped for the area, however due to their small size and association with forested sites, accurate acreage estimates are difficult. Timbered hill slopes are dominated by western hemlock, Sitka spruce and Alaska-cedar plant communities. Minor amounts of western redcedar are present in the southern part of the area. The roadless area is near the northern limit for western redcedar. There are no acres mapped as alpine vegetation within the roadless area.

There are approximately 85,425 acres of forest land of which 20,694 acres or 24 percent are mapped as productive old-growth forest. Of the productive old growth, 4,622 acres or 22 percent are mapped as high-volume old-growth forest. The productive old growth includes about 659 acres of high-volume, coarse-canopy old growth. There are approximately 54 acres of second-growth forest where timber harvest has occurred in the past. The majority of the productive old growth is in the Bohemian Range in the eastern portion of the area. The northeastern area is sometimes referred to as the “barrens.”

**(d) Fish Resources:** About 12 Alaska Department of Fish and Game numbered salmon streams are present. The major streams are the Hamilton River, Big Creek, and Duncan Salt Chuck Creek. This area also contains the headwaters of Cathedral Falls Creek and Gunnuk Creek. These streams support runs of steelhead and cutthroat trout, Dolly Varden char, and pink, chum, and coho salmon.

**(e) Wildlife Resources:** Sitka black-tailed deer, moose, black bears use this roadless area. Wolves are located across all habitat types. Mink, river otters, beaver, marten, ermine, red squirrel, mice, shrews, and voles are well distributed. Fishers and wolverines are incidental species. The northern flying squirrel has been migrating to Kupreanof Island but is not yet well distributed on the island; some may occur within this roadless area.

Bald eagles, northern goshawks, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, spruce grouse and ptarmigan all occur within the roadless area. Bats are present during the summer months and may over winter.

Numerous species of ducks and geese, trumpeter swans, marbled murrelets, and great blue herons have been seen within this roadless area, both during migration and, in some cases, during the nesting season.

Red-throated, Pacific, and common loons all occur on Kupreanof Island. Several plover, yellowlegs, and sandpiper species occur, mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Amphibians known to occur on Kupreanof Island include the rough-skinned newt and western toad. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts.

Sea mammals known to inhabit the waters surrounding Kupreanof Island are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal. Frederick Sound to the north of this roadless area has large populations of humpback whales during the summer and fall.

**(5) Management Direction and Current Uses:** This area was allocated to six Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These six LUDs are Timber Production, Modified Landscape, Transportation and Utility System (TUS), Old-growth Habitat, Semi-remote Recreation, and Municipal Watershed. The TUS LUD is a secondary LUD that overlays the other land uses.

| LUD | Acres |
|---|---|
| Timber Production | 60,105 |
| Modified Landscape | 247 |
| Transportation and Utility System | NA |
| Old-growth Habitat | 22,266 |
| Semi-remote Recreation | 16,169 |
| Municipal Watershed | 779 |

Approximately 61 percent of the roadless area (not including the TUS LUD overlay) was allocated to a development LUD (Timber Production, Modified Landscape). Timber Production makes up almost all of this development LUD portion. A small area, accounting for less than 1 percent of the roadless area, was allocated to the Modified Landscape LUD. The Transportation and Utility System LUD overlay is located within the roadless area in the south. This LUD overlay corresponds to a potential utility corridor that would connect Kake to Petersburg and other areas of Southeast Alaska in a power grid. Similarly, another portion of this LUD overlay is located in the northwest corner. A utility corridor along the LUD overlay would contribute to a connection with Juneau.

Approximately 39 percent of the roadless area was allocated to a non-development LUD (Old-growth Habitat, Semi-remote Recreation, Municipal Watershed). The north central part of the area was allocated to the Semi-remote Recreation LUD and includes most of the Big Creek drainage. The Semi-remote Recreation LUD accounts for approximately 16 percent of the roadless area. The Old-growth Habitat LUD was allocated to two locations in the roadless area, accounting for 22 percent of the roadless area. One Old-growth Habitat LUD area is located near Frederick Sound and includes the northern portion of the Bohemian Range. The other location includes much of the Hamilton Creek watershed, just northwest of the South Kupreanof Roadless Area (214). Approximately 1 percent of the roadless area, located in the west, was allocated to the Municipal Watershed LUD. This area is part of the watershed associated with the community of Kake. Most of the watershed is not National Forest System land.

Sea kayaking; marine wildlife viewing; beachcombing; camping; fishing for coho salmon, pink salmon, steelhead, and trout; hunting for bear, deer, and moose; waterfowl hunting; and sport fishing, occur in the areas adjacent to

saltwater and major creeks. Other recreation uses include hiking; camping, and snowmobiling in the interior of the area. Kake residents use this area for subsistence resources.

The Bohemia Timber sale is adjacent to the northern part of this roadless area. Many of the units have been cut but some are still under contract. Other timber harvest projects are currently planned on the 10-year timber resource schedule.

A potential transmission line corridor in the northwest corner that would connect Kake with Juneau's power supply has been identified in the Forest Plan. Another potential corridor traverses across the southern part of the roadless area and would connect Kake and Petersburg.

**(6) Appearance (Apparent Naturalness):** The area appears unmodified from priority travel routes. Forest. Road 6030, the White Rock Road, extends from near Hamilton Bay to the west, 15 miles inland, but is not visible to viewers from saltwater. Recent timber harvest and road building along the eastern and southwestern boundaries and in the interior of the roadless area near Road 6030 may be seen from adjacent areas within the roadless area.

**(7) Surroundings (External Influences):** North Kupreanof Roadless Area adjoins a large parcel of Native Corporation lands to the west; much of this area has been developed for timber management. The South Kupreanof Roadless Area and the Petersburg Creek-Duncan Salt Chuck Wilderness lie to the southeast. Frederick Sound is to the north. Harvest activities on Native Corporation lands to the west are evident from Frederick Sound and the adjacent areas. Forest Service harvest activities are evident in the area to the southwest and to the east.

**(8) Attractions and Features of Special Interest:** The area contains 11 inventoried recreation places that cover 42,385 acres, or 43 percent of the roadless area. The areas immediately adjacent to saltwater and major creeks are valued for recreation uses such as black bear and waterfowl hunting, camping, beach combing, and sport fishing, as well as subsistence activities. Eleven outfitter/guide permits were issued in 2000. These included 39 service days for remote setting tours, 300 for camping, and 42 for black bear hunting. The waters to the north of the area are valuable for whale watching and research. Sea kayaking is popular in these waters as well. Goose Lake Trail in the southwest corner is an easy walk to a small lake with waterfowl use.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The area along the west shore of Portage Bay and the area southeast of the bay have been dropped from the roadless area due to timber harvest and road building (part of the Bohemia Mountain Timber Sale). Small adjustments have been made to the boundary along the developed areas and associated with changes in land ownership 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 appears natural from priority travel routes. The portion of Forest Road 6030 that extends into the roadless area is far inland and not readily visible to viewers from saltwater. Recent timber harvest and road building along the eastern and western boundaries and in the interior of the roadless area near Road 6030 affect the appearance of adjacent areas. Most of the area away from roads appears natural and has high natural integrity; however, the area is nearly divided into two parts by roads. The larger portion of the area north of the developments that nearly dissect the area has higher natural integrity and apparent naturalness.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude in the North Kupreanof Roadless Area. Floatplanes and powerboats may be seen or heard for brief periods. Current recreation use levels are low to moderate and concentrated mainly along saltwater and at specific locations adjacent to the major creeks and drainages.

Except for the Bohemian Range in the east, most of the topography is relatively gentle. Travel on land is moderately difficult, offering a lesser degree of physical challenge than many other roadless areas in Southeast Alaska. 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 and semi-primitive 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) | 33,576 | 34% |
| Semi-Primitive Non-Motorized (SPNM) | 51,356 | 52% |
| Semi-Primitive Motorized (SPM) | 5,442 | 5% |
| Roaded Natural (RN) | 1,088 | 1% |
| Roaded Modified (RM) | 8,103 | 8% |

The area contains 11 inventoried recreation places that cover 42,385 acres, or 43 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 1 | 377 |
| SPNM | 6 | 39,891 |
| SPM | 3 | 813 |
| RN | 0 | 0 |
| RM | 5 | 1,303 |

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

This roadless area contains no developed recreation; however, two public recreation cabins are located nearby in Portage Bay. Black bear and waterfowl hunting, camping, beach combing, and sport fishing, as well as subsistence activities occur in the areas adjacent to saltwater and along major creeks. Outfitters and guides use the area for remote setting tours, camping, sea kayaking, whale watching, and black bear hunting.

**(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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the North Kupreanof Roadless Area was given a rating of 23 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 primarily reflects the effects of developments that nearly divide the roadless area on wilderness attributes. The northern portion of the roadless area was rated separately and received a rating of 22.

**(4) Ecologic and Geologic Values:**

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 424, 425, and 426, the majority of the roadless area, as primary salmon and sportfish producers.

The major streams in this roadless area are the Hamilton River, Big Creek, and Duncan Salt Chuck Creek. This area also contains the headwaters of Cathedral Falls Creek and Gunnuk Creek. The Hamilton River is a large stream with significant salmon returns. Due to difficult survey conditions, accurate escapement estimates are not possible. Although no spawning data are available, Hamilton River is known to produce very good runs of steelhead and coho salmon and has high value for sport fishing. Sport anglers and Kake

residents fish in the Hamilton River. Kake natives use the river for chum and coho subsistence fishing. The steelhead run has been measured at 550 adult fish. Big Creek has an estimated annual escapement of 22,400 pink salmon (ADF&G, 1998). Duncan Salt Chuck Creek has high values for steelhead, coho salmon, and cutthroat trout. ADF&G lists this stream as one of 19 "high value" watersheds in Southeast Alaska. Halibut fishing for sport is popular in the Frederick Sound to the north.

**(b) Wildlife Resources:**. Sitka black-tailed deer and moose are present but the majority of this roadless area has low habitat qualities for deer and moose. However, moose and deer populations are increasing from the low populations that occurred during the 1960s and 1970s. There have been unconfirmed sightings of elk. Elk, a non-native species, are strong swimmers; they may have migrated from where they were introduced on Etolin Island. Black bears are abundant and hunted in this area from the adjacent road system. Wolves are located across all habitat types. Furbearers such as mink, river otters, beaver, marten, and ermine are well distributed and some trapping occurs. There is a key wildlife and waterfowl migration route on the isthmus between Duncan Salt Chuck and Portage Bay to the southeast of this roadless area. The saltwater to the north contains some of the highest population densities of humpback whales in Southeast Alaska that provide wildlife viewing opportunities.

Numerous species of ducks and geese, trumpeter swans, marbled murrelets, and great blue herons have been seen within this roadless area, both during migration and, in some cases, during the nesting season. Numerous harlequin ducks were observed in Frederick Sound.

This roadless area provides habitat for many species of birds especially those that prefer more open muskeg areas and forest wetland. Goose Lake and the adjacent area provide habitat for waterfowl and visiting trumpeter swans. There are no major bays to attract concentrations of waterfowl.

**(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, 12 sensitive plant species are known or suspected to occur in the Petersburg Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There is one small area of low vulnerability karst near Hamilton Creek north of Towers Lake. There are 117 acres of karst resources, or less than 1 percent, mapped in this roadless area. There are no unique geologic features in this area.

**(5) Scientific and Educational Values:** There are currently several whale research projects being conducted in the waters north of the area. There were 39 service days of commercially provided remote setting nature tours in 2000.

**(6) Scenic Values:** The area is mostly unmodified, displaying uniformly rolling lowlands with the Bohemian Range rising to over 2,200 feet. Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Frederick Sound, a part of the Alaska Marine Highway, a tour ship route, and a saltwater use area; Portage Bay, a boat anchorage and saltwater use area; Goose Marsh Lake, a dispersed recreation area; and the Portage Bay and West Point public recreation cabins.

None of this roadless area is an inventoried Variety Class A (possessing landscape diversity that is unique for the character type). Approximately 12 percent of this area is inventoried as Variety Class B (possessing landscape diversity that is common for the character type). Most of this area, 88 percent, is inventoried as Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area (87 percent) is natural appearing, where only ecological change has occurred (Existing Visual Condition (EVC) Type I). About 2 percent of this roadless area is EVC Type III, where changes in the landscape are seen by the average forest visitor. The natural appearance of the landscape remains dominant. Approximately 9 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. The remaining 2 percent of the area is in EVC VI, where changes in the landscape are in glaring contrast to the natural landscape.

**(7) Social, Cultural, and Historical Values:** The area lies within the traditional territory of the Kake Tlingit and is adjacent to the present community of Kake. No known significant cultural resources exist in the area. The lower reaches of Cathedral Falls Creek and Hamilton River are areas of traditional and current subsistence uses. Extensive road construction and timber harvest had occurred to the south, east, and west of the area. Recreation use and guided visits to the area are high. The road system is used to access hunting and fishing grounds. The road systems adjacent to this roadless area provide the primary access for residents of Kake. VCUs 425 and 426 were listed in the VCU group with the highest community use values and VCU 424 was listed in the third most important group of VCUs for community use values. No VCUs were listed among the VCUs with highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** The North Kupreanof Roadless Area has been influenced by the adjacent community of Kake and by timber sales originating from the Portage Bay area.

In 1983, the Bohemia Timber Sale Environmental Assessment and Decision Notice were approved. Due to poor timber markets, parts of this timber sale have never been sold. A portion of Forest Road 6030 was constructed using Tongass Timber Supply Fund money in an effort to offset the lower value timber in this area. This road (Road 6030) enters the roadless area from the west. In 1995, the Final Supplemental Impact Statement for the Bohemia Mountain Timber Sale authorized building a road (Road 6031) into the eastern portion of the roadless area from the existing road on the east side of Portage Bay and extending Road 6030 from the west. These two roads nearly meet in the eastern portion of the roadless area, nearly bisecting the roadless area. Therefore, it may be logical to manage the area north of Roads 6030 and 6031 as a separate roadless area from the area to the south. This road and the accompanying timber harvest resulted in the portion of the roadless area between Portage Bay and Road 6031 being dropped from Roadless Area 211.

The Forest Plan identified a potential powerline corridor across the roadless area (partially following Forest Road 6030) to connect Kake with the Tyee powerline. There is also a proposed powerline route that crosses the northwestern corner of the roadless area, linking Kake with areas to the north. The roadless area also contains a potential transportation corridor linking Kake and Petersburg. If built, this road would definitely split the roadless area into two separate roadless areas.

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

**(1) Recreation, Including Tourism Potential:** Recreation potential in this area is moderate, reflecting its proximity to the community of Kake. The area could be accessed by foot from the adjacent road system, with appropriate trail development.

**(2) Subsistence Uses:** The existing patterns of subsistence activities in the area would not be affected by wilderness designation. Demand within the roadless area has historically been light.

**(3) Fish Resources:** No fish habitat enhancement projects are currently planned.

**(4) Wildlife Resources:** No wildlife habitat enhancement projects are currently planned. Small Old-Growth Reserves have been recommended for redesign to provide greater protection of deer habitat and subsistence hunting opportunities. A medium Old-Growth Reserve covers a large portion of this area. Wilderness designation or continued management in an unroaded condition would contribute to these goals.

**(5) Timber Resources:** There are approximately 20,694 acres mapped as productive old growth and 54 acres mapped as second growth in the roadless area. Of this area, 13,754 acres are categorized as tentatively suitable for timber production based on national criteria. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 5,475 acres, or 6 percent of this roadless area are estimated to be suitable for timber production. Approximately 1,061 of the suitable acres are mapped as high-volume old growth; of these acres, 93 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:** The USGS has identified potential copper resources in the Duncan Salt Chuck area. Valid mining claims exist west of Duncan Salt Chuck Creek. The area within and adjacent to Cathedral Falls Creek corridor has also been identified as an area with potential for mineral extraction of sedimentary uranium by the U.S. Bureau of Land Management.

The roadless area contains 629 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). The roadless area also contains an estimated 13,016 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:** The roadless area contains a potential transportation corridor linking Kake and Petersburg, partially following existing roads across the area. The road would extend between Kake and Twelvemile Creek on the northeast corner of Kupreanof Island, with new road segments on the east side of the island along Frederick Sound, leading to a new channel crossing ferry across Wrangell Narrows to Petersburg. This road was considered in the planning process for the Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999). Construction of this road was not recommended as part of the initial buildout to implement the plan. It was recommended for further evaluation if travel demand grows. This route is also included as a route for consideration by Southeast Conference in their ongoing assessment of long-term transportation needs for Southeast Alaska. The portion of VCU 441 located within this roadless area was left out when the adjacent Petersburg Creek-Duncan Salt Chuck Wilderness was created. The intent was to allow for future road access options from Portage Bay to the Bohemia Mountain area and Kake, and a future tie-in with Forest Road 6030. If built, this road would split the area into two separate roadless areas.

There is a potential powerline corridor across the roadless area that would connect Kake with the existing powerline on Mitkof Island. There is also a potential powerline route that crosses the northwestern corner of the roadless area, linking Kake with areas to the north.

**(9) Water Availability and Use:** No developed recreation or other facilities exist to create a water demand within the roadless area. The Gunnuck Creek area is allocated as a Municipal Watershed for the community of Kake, which is west of North Kupreanof Roadless Area.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas and has not been identified for any other scientific value. The karst formation in the area may be of scientific interest since karst formations are relatively rare on many islands of Southeast Alaska. The mapped karst resources encompass approximately 117 acres or less than one percent of the roadless area.

**(11) Land Use Authorizations:** There are no land use authorizations in the area.

**(12) Land Status:** All land within the roadless area is part of the National Forest System. Encumbered land located within the roadless area is mainly in the west, 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 is of concern to local residents of Kake. Future timber sales may provide employment and other opportunities. A road connection from Kake to Petersburg has been discussed for some time. It would utilize Forest Road 6030 from Kake, and tie into the Portage Bay road system. This would involve crossing this roadless area. Residents of Kake have proposed building a powerline across the roadless area to connect Kake with the Tyee powerline in order to provide less expensive electricity to develop value-added industries.

**(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 bill did not include this area. In 2001, HR 2908 proposed that that portion of the roadless area south of Road 6030, along with Roadless Areas 214 and 215 be added to the Petersburg Creek/Duncan Salt Chuck Wilderness and that most of the roadless area north of the road be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

**(c) Public Input During Forest Plan Revision and Appeals:** In 1996, the Alaska Visitor Association proposed that recreation facilities should be developed across the southern part of the area between Hamilton Bay and Towers Arm to support hut-to-hut canoeing. Timber industry comments supported continued road building and timber harvest. The Cathedral Falls Creek and Hamilton Creek areas were identified in appeals as being of particular concern for Wild and Scenic River designation because of their outstanding scenic, recreation, fish, and subsistence values. Concern was also voiced regarding timbering and associated loss of deer habitat in this area because of high subsistence use.

**(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 Bohemia Mountain EIS stated that roads in the isthmus between Portage Bay and Duncan Canal would be very expensive to maintain and are not needed. Commenters also noted that roads harm wildlife.

**(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 that the remaining unlogged portions of northern Kupreanof Island (Roadless Areas 211, 212, and 213) be designated LUD II to safeguard their valuable fish and wildlife habitat important for subsistence, fishing, and hunting for residents of Kake and Petersburg. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 211 for permanent protection as LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** North Kupreanof is one of four contiguous roadless areas on the western half of Kupreanof Island. Rocky Pass, South Kupreanof, Castle Roadless Areas are located on the western half of Kupreanof Island, and Missionary Roadless Area on the northeast corner of the island. The Petersburg Creek-Duncan Salt Chuck Wilderness also adjoins these roadless units. This area receives low recreational use.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 90 | 90 |
| Ketchikan (Pop. 14,070) | 120 | 175 |
| Wrangell (Pop.2,308) | 50 | 60 |
| Petersburg (Pop. 3,324) | 15 | 30 |

Petersburg and Kake are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The North Kupreanof Roadless Area is at the north end of Kupreanof Island and lies along the southern shore of Frederick Sound. The roadless area is generally characterized by uniformly rolling lowlands. The Bohemia Range rises to an elevation of over 2,200 feet, providing topographic relief to essentially flat terrain. The ridge parallels other ridges on Kupreanof Island in a roughly northwest to southeast direction, with extensive areas of lowlands in between. Three major drainage systems, Hamilton Creek, Big Creek and Cathedral Falls Creek, wind across much of this area. There are many small lakes.

The area itself is mostly unmodified; however, it is influenced by developments and associated activities on the east and west sides, as well as by two roads which nearly divide the area. The overall area has moderate natural integrity and relatively high apparent naturalness. When the area is rated without the southern portion, the separated area has very high natural integrity and apparent naturalness. The opportunity for solitude and primitive recreation is high for the roadless area.

None of the landscape in the area is considered distinctive for the character type from a scenery standpoint.

A small portion of the roadless area located in Hamilton Creek drainage is part of the Kake Municipal Watershed. There is one small area of karst near Hamilton Creek north of Towers Lake.

The roadless area includes about 4,622 acres of high-volume, old-growth forest. Of these acres, 659 are mapped as high-volume, coarse-canopy old growth.

The North Kupreanof Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 12 percent of the province. It is one of 12 inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The North Kupreanof Roadless Area lies within two ecological sections; it represents 9 percent of the Kupreanof Lowlands Ecological Section and less than 0.1 percent of the Inside Passage Fjordlands 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, while 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 majority (81 percent) of the roadless area is in the Duncan Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents 33 percent of the entire ecological subsection, 5 percent of which is in existing wilderness, and is well represented by other existing non-development LUDs (35 percent). Most of the balance (18 percent) of this roadless area is within the Kake Volcanics Ecological Subsection; this portion of the roadless area represents 13 percent of the entire ecological subsection. Approximately 23 percent of this ecological subsection is protected by other existing non-development LUDs. Less than 1 percent of the roadless area is in the Wrangell Narrows Metasediments Ecological Subsection; this portion of the roadless area represents less than 1 percent of the entire ecological subsection, which is protected by existing wilderness (11 percent) and other non-development LUDs (18 percent).

The North Kupreanof 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. A separate rating was done for the northern portion of the roadless area and it received a score of 22.

There is both local and national support for management of the area in an unroaded condition. There is some support for designation as wilderness, especially the portions near the wilderness boundary. Designation of the area as wilderness would add Congressional protection to approximately 13 percent of the Kake Volcanics Ecological Subsection that is not currently represented in wilderness or LUD II. There is substantial local support for reserving road and powerline corridors to be able to connect the communities of Kake and Petersburg in the future. These

were considerations used by Congress in their designation of the Petersburg Creek-Duncan Salt Chuck 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 North Kupreanof Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 is implemented. Approximately 39 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 61 percent. The land in the development LUDs provides an estimated 5,475 acres that are suitable for timber production (4 percent of the suitable acres on the Petersburg Ranger District). Approximately 93 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains about 629 acres of land identified as a mineral activity tract having a low potential for experiencing mineral exploration and development of locatable minerals. The roadless area also contains an estimated 13,016 acres of undiscovered locatable mineral resources; all of the acres are considered to have low potential for development. Planning for the State road and power grid connections between Kake and Petersburg would continue. The timber sales, recreation, minerals, and special use programs would continue. The values associated with the natural settings of this roadless area would be affected with ongoing developments, especially in the vicinity of current developments.

Under Alternative 6, a 68,603-acre portion of the roadless area would be converted to Recommended LUD II. The remaining portion of the roadless area, approximately 30,963 acres, would be converted to Recommended Wilderness. No timber harvest would be allowed in the roadless area. The ongoing recreation, transportation and utility planning, minerals, and special use programs could continue similar to current conditions in the Recommended LUD II. Restrictions would be expected on programs in the Recommended Wilderness portion. A small portion of the State road and power corridor would be affected by the Recommended Wilderness, but the route could likely be adjusted outside the Recommended Wilderness area. Mineral prospecting would be allowed in the Recommended Wilderness portion up to the time that the area is actually designated as wilderness by Congress. Designation of the area as wilderness would add Congressional protection to approximately 13 percent of the Kake Volcanics Ecological Subsection that is not currently represented in wilderness or LUD II. Long-term protection of the values associated with the natural settings of the roadless area would be provided if designated as LUD II or wilderness.

Under Alternative 7, a 30,963-acre portion (same as in Alternative 6) of the roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses programs could be restricted in the Recommended Wilderness area. Lands suitable for timber production in the roadless area would be reduced to approximately 2,643 acres. A small portion of the State road and power corridor would be affected by the designation Recommended Wilderness, but the route could likely be adjusted outside the Recommended Wilderness area. Mineral prospecting would be allowed in the Recommended Wilderness portion up to the time that the area is actually designated as wilderness by Congress. Ongoing programs would continue as in Alternative 1 for areas outside of the Recommended Wilderness. The values associated with the natural settings of the southern 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. Timber harvest would not be allowed and the ongoing recreation, minerals, and special uses programs could be restricted. The road and power connection between Kake and Petersburg would likely not be able to be constructed in the area. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area as wilderness would add Congressional protection to approximately 13 percent of the Kake Volcanics Ecological Subsection that is not currently represented in wilderness or LUD II. 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 211 (in acres) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Land Use Designation** | **Alt 1** | **Alt 2** | **Alt 3** | **Alt 4** | **Alt 5** | **Alt 6** | **Alt 7** | **Alt 8** |
| **Recommended Wilderness** | | | | | | 30,963 | 30,963 | 99,566 |
| **Wilderness** | | | | | | | | |
| **Recommended Wilderness Nat. Mon.** | | | | | | | | |
| **Wilderness National Monument** | | | | | | | | |
| **Non-wilderness National Monument** | | | | | | | | |
| **Research Natural Area** | | | | | | | | |
| **Special Interest Area** | | | | | | | | |
| **Remote Recreation** | | | | | | | | |
| **Enacted Municipal Watershed** | 779 | 779 | 779 | 779 | 779 | | 779 | |
| **Old-growth Habitat** | 22,266 | 22,266 | 22,266 | 22,266 | 22,266 | | 14,046 | |
| **Semi-remote Recreation** | 16,169 | 16,169 | 16,169 | 16,169 | 16,169 | | 16,169 | |
| **Recommended LUD II** | | | | | | 68,603 | | |
| **LUD II** | | | | | | | | |
| **Wild, Scenic, Recreational River** | | | | | | | | |
| **Experimental Forest** | | | | | | | | |
| **Scenic Viewshed** | | | | | | | | |
| **Modified Landscape** | 247 | 247 | 247 | 247 | 247 | | 35 | |
| **Timber Production** | 60,105 | 60,105 | 60,105 | 60,105 | 60,105 | | 37,574 | |
| **TOTAL** | **99,566** | **99,566** | **99,566** | **99,566** | **99,566** | **99,566** | **99,566** | **99,566** |
| **Suitable Timber Lands** | 5,475 | 5,475 | 5,475 | 5,475 | 5,475 | 0 | 2,643 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Missionary (212)

**ACRES (NFS):** 14,825

**BIOGEOGRAPHIC PROVINCE:** Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 16

### I. Overview and Description

**(1) Location and Access:** The Missionary Roadless Area lies at the north end of the Lindenberg Peninsula on Kupreanof Island along the southern shore of Frederick Sound. The community of Kake lies 25 air miles to the west, and the community of Petersburg lies about 10 miles to the south. Petersburg and Kake are served by the Alaska Marine Highway and Petersburg has daily jet service. Access to the Missionary Roadless Area is by floatplane or boat. From Portage Bay to the east, a logging road system accesses three sides of this roadless area but does not connect to any community. There are no sites suitable for landing wheeled aircraft or floatplanes in the interior of this area. Access into the interior is by foot or helicopter.

**(2) History:** The area lies within the traditional territory of the Stikine Tlingit. Cultural resources have been identified along the coast adjacent to the area. These include historic period cabins, culturally modified trees, and prehistoric period, fish traps, camps and villages. No known cultural sites exist inland. Relatively extensive road construction and timber harvest has occurred around nearly the entire area and some timber has been harvested within the area.

**(3) Geography and Topography:** This area's most predominant feature is the Missionary Mountain Range, a small alpine region of approximately 15 square miles. It includes 7 peaks over 3,000 feet in elevation, the highest being Kane Peak at 3,250 feet. The alpine reaches exhibit precipitous bare rock summits with connecting ridgelines. Four glacial cirque lakes are present with a combined size of 63 acres. The majority of the roadless area (75 percent), is forested and includes the lower elevations below alpine to the road system adjacent saltwater. The slopes below alpine are moderate to high in steepness and mostly uniform. The area contains the watersheds of three medium-sized streams and several small streams that empty directly to saltwater. Except for Twelvemile Creek, which form the southeast boundary, the streams within the area are high gradient and generally short and include the headwaters of Todahl Creek and Portage Creek. The roadless area is connected to saltwater for about 2 miles north of the mouth of Twelvemile Creek. Rock covers approximately 76 acres in this area and there are no acres mapped as alpine or icefield.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province. This province is characterized by generally subdued, rolling topography and extensive muskeg areas, with localized, rugged topography. Uncharacteristically, this roadless area has rugged topography, and glacial cirques lakes are present.

Ecological Section/Subsection. The Missionary Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), Wrangell Narrows Metasediments Ecological Subsection (see table below). Mountains of sedimentary origin have been extensively reshaped by glaciers and glacial deposition. Slopes are forested with hemlock, spruce, and cedar while lodgepole pine and mixed-conifer stands are found in poorly drained soils. Wetlands are common in low relief, depositional areas. Thick peat deposits have accumulated in some sites with poor drainage (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Wrangell Narrows Metasediments | 100% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are very acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly-drained soils developed on less sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet in elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Spruce-hemlock forests dominate the mountainsides of this area. Alpine vegetation dominates the mountain ridge tops. There are minor amounts of muskeg in small pockets.

There are approximately 13,332 acres mapped as forest land of which 7,115 acres or 53 percent are mapped as productive old-growth forest. Of the productive old growth, 3,144 acres or 44 percent are mapped as high-volume old-growth forest. The productive old growth includes about 554 acres of high-volume, coarse-canopy old growth. There are about 193 acres of second-growth forest where helicopter harvest occurred in the late 1990s.

**(d) Fish Resources:** The streams in this roadless area include the headwaters of Todahl Creek and Portage Creek, and parts of Twelvemile Creek. Grayling, was introduced into Kane Lake. These streams support runs of steelhead and cutthroat trout, Dolly Varden char, and pink, chum, and coho salmon.

**(e) Wildlife Resources:** Sitka black-tailed deer, moose, black bears use this roadless area. Wolves are located across all habitat types. Mink, river otters, beaver, marten, ermine, red squirrel, mice, shrews, and voles are well distributed. Fishers and wolverines are incidental species. The northern flying squirrel has been migrating to Kupreanof Island but is not yet well distributed on the island; some may occur within this roadless area.

Bald eagles, northern goshawks, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, spruce grouse, and ptarmigan all occur on within the roadless area. Bats are present during the summer months and may over winter.

Numerous species of ducks and geese, trumpeter swans, marbled murrelets, and great blue herons have been seen within this roadless area, both during migration and, in some cases, during the nesting season.

Red-throated, Pacific, and common loons all occur on Kupreanof Island. Several plover, yellowlegs, and sandpiper species occur, mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Amphibians known to occur on Kupreanof Island include the rough-skinned newt and western toad. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests and muskeg bog

ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts.

Sea mammals known to inhabit the waters surrounding Kupreanof Island are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal. Frederick Sound to the north of this roadless area has large populations of humpback whales during the summer and fall.

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

| LUD | Acres |
|---|---|
| Scenic Viewshed | 4,571 |
| Modified Landscape | 3,376 |
| Timber Production | 469 |
| Old-growth Habitat | 6,409 |

Most of the area, approximately 57 percent, was allocated to one of three development LUDs (Scenic Viewshed, Modified Landscape, Timber Production). Approximately 31 of the roadless area was allocated to the Scenic Viewshed LUD. This LUD is located in the northern part of the Missionary roadless area where the landscape can be seen from Frederick Sound. The Modified Landscape LUD, was assigned to approximately 23 percent of the roadless area. This LUD is located in the less frequently seen areas south of Frederick Sound. Approximately 3 percent of the roadless area was allocated to the Timber Production LUD, located along and near Twelvemile Creek.

Approximately 43 percent of this roadless area was allocated to one non-development LUD, Old-growth Habitat. The Old-growth Habitat LUD is located on the south slope of the Missionary Range and near Cape Strait. Several miles of road were decommissioned in this LUD in 1999 to be compatible with the prescription.

Fishing and hunting are the main recreational uses in the area. One of the lakes, Kane Lake, was stocked with grayling and receives occasional use. Deer hunting was closed in the area from 1975 until 1993 but is currently permitted. Most use is concentrated along the outside edges of the area, which are accessible by roads from Portage Bay, but overall use levels are low. There is some subsistence use in the area.

Bohemia Timber Sale, Alternatives-to-Clearcutting Research Study and Scattered Timber Sale have harvested units by helicopter within this roadless area in the late 1990s. The Todahl Backline Timber Sale in the northern part is currently under contract but has not been harvested and will remove trees on one to two acre patches by helicopter logging. In the southeastern part, analysis is ongoing for the Scott Peak Project Area, a proposed timber harvest area where roads may be constructed. No proposed units have been defined at this time.

**(6) Appearance (Apparent Naturalness):** About one-third of the area appears unmodified, mainly the Missionary Range. The remainder of the area has been heavily influenced by adjacent management activities, mainly timber harvest and roads. The area includes over 100 helicopter units, 2 to 3 acres each, that have been harvested or are under contract. One larger clearcut in the western part of the area, which was helicopter logged, potentially isolates the northwest section from the rest of the roadless area.

**(7) Surroundings (External Influences):** The eastern boundary of the roadless area is adjacent to Roadless Area 213. The two roadless areas share a 1-mile long boundary. Roads and timber management activities occur on three sides of the roadless area. Also, roads nearly bisect the area. Noise and sights of vehicles and active timber sales may occur periodically, being greatest in magnitude near the roads and lessening as one moves away. Portage Bay, adjacent to the west of this roadless area, has a log transfer facility and logging camp. At times, it is busy with activity. Frederick Sound, which receives heavy boat traffic, is adjacent to the northeast boundary of the area. Low-flying aircraft may temporarily distract visitors in the area.

**(8) Attractions and Features of Special Interest:** Although the area is relatively close to Petersburg and there are anchorages in Portage Bay, there are few attractions that have historically drawn visitors into the roadless

area. The area contains one inventoried recreation place, which covers 86 acres, or less than 1 percent of the roadless area. The main attractions are opportunities for black bear and deer hunting when the season is open, and grayling fishing in the Kane Lake where they have been introduced.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** A triangular-shaped area between road corridors has been added to the roadless area in the southeast, near the boundary with Roadless Area 213. This area has been taken out of the roadless area for the Final SEIS because of the relatively small size and how the existing roads pinch off the area from the main part of the roadless area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** Some of the area has been modified by timber harvest, while the remainder appears unmodified; however its overall appearance is not considered pristine. The irregular shape of the area, and the roads and timber harvest up the Todahl Creek and Portage Creek valleys, also have negatively affected the area's natural integrity and apparent naturalness. The entire area is less than 2 miles from a road.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a moderate opportunity for solitude within the area. Air and boat traffic, and occasional vehicle traffic pass nearby, and may be heard and observed by people in this roadless area. Overall recreation use levels are low, being higher near road and water access. Generally, a person camped or traveling inland is unlikely to encounter others. Timber harvest or other activities in the adjacent areas, which occur periodically, could have a significant impact on the opportunity for solitude when they are occurring. The mountainous terrain and the heavy vegetation at lower elevations provides a visitor the opportunity to find locations remote from the sights and sounds of human activity. The area is accessible from the community of Petersburg by boat, float plane, and helicopter.

Travel on land is difficult, offering a high degree of physical challenge. 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 and roaded recreation opportunities. The following 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) | 7,752 | 52% |
| Semi-Primitive Motorized (SPM) | 405 | 3% |
| Roaded Modified (RM) | 6,668 | 45% |

The area contains one inventoried recreation place, which covers 86 acres, or less than 1 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| SPNM | 0 | 0 |
| SPM | 1 | 84 |
| RM | 1 | 2 |

* Some Rec. Places 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 opportunities in this area. Recreation includes deer hunting when the season is open, and grayling fishing in the one lake where they are found. Commercial guides use the area for nature tours, freshwater fishing, and black bear hunting.

**(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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Missionary Roadless Area was given a rating of 23 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 16. This rating better reflects the degree of developments on adjacent lands and their effects on the wilderness attributes of this relatively small area.

**(4) Ecologic and Geologic Values:**

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

Twelvemile Creek is the only Class I stream within this roadless area. Tributaries of Portage Creek and Todahl Creek, both Class I streams are also in the area. Portions of the three largest stream's watersheds in this area (Todahl, Portage, and parts of Twelvemile Creek) have been developed. There are two fish ladders in Portage Creek that will enable coho salmon to utilize an extensive area of upstream habitat.

**(b) Wildlife Resources:** Sitka black-tailed deer and moose are present but the majority of this roadless area has only moderate habitat qualities for deer. However, deer populations are increasing from the low populations that occurred during the 1960s and 1970s. Moose have just recently established themselves in this area. Black bears are abundant and hunted in this area from the adjacent road system. Wolves use this area in conjunction with the rest of Kupreanof Island. Furbearers such as mink, river otters, beaver, marten, and ermine are well distributed and some trapping occurs. There is a key wildlife and waterfowl migration route on the isthmus between Duncan Salt Chuck and Portage Bay to the southwest of this roadless area. Fivemile Creek attracts waterfowl. The saltwater to the north contains some of the highest population densities of humpback whales in Southeast Alaska that provide wildlife viewing opportunities.

**(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 sighted in the general area. In addition, twelve sensitive plant species are known or suspected to occur in the Petersburg Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are no known karst or cave resources in this roadless area. A unique geologic feature is an unusual mineral outcrop located near the east side of the area. There are no glaciers in the area.

**(5) Scientific and Educational Values:** The grayling stocked in one small lake could be studied to see the effects of a non-native species. An unusual mineral outcrop is located near the east side of the area.

**(6) Scenic Values:** The area is mostly unmodified; however its overall integrity is not considered pristine. The irregular shape of the area, and the roads and timber harvest up the Todahl Creek and Portage Creek valleies, have negatively affected the area's apparent naturalness.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Frederick Sound, a part of the Alaska Marine Highway, a tour ship route, and a saltwater use area; Portage Bay, a boat anchorage and saltwater use area; and the Portage Bay public recreation cabin.

Thirty-five percent of this roadless area is inventoried in Variety Class A (possessing landscape diversity that is unique for the character type) and 64percent of the acreage is inventoried as Variety Class B (possessing landscape diversity that is common for the character type). About 1 percent of the area is inventoried in Variety Class C (possessing a low degree of landscape diversity).

About 34 percent of the area is in EVC I; these areas appear to be untouched by human activity. About 31 percent is in EVC IV, in which changes to the landscape are easily noticed by the average person and may attract some attention. The disturbances are apparent, but resemble natural patterns. About 35 percent of the area is in Existing Visual Condition (EVC) V. These are areas in which changes to the landscape are obvious to the average person, and appear to be major disturbances.

**(7) Social, Cultural, and Historical Values:** The area lies within the traditional territory of the Stikine Tlingit. No known cultural sites exit in the area, though cultural resources have been identified along the adjacent coast. These include historic period cabins, culturally modified trees, and prehistoric period fish traps, camps and villages. Relatively extensive road construction and timber harvest has occurred around nearly the entire area and some timber has been harvested within the area. Aside from timber management, the road system provides access to fishing, hunting, and trapping destinations. Recreation use of the area is moderate. Sport fishing and trapping occurs at the mouth of Twelvemile Creek. Use will probably remain the same until connected to a community by road or public boat service. None of the VCUs in this area were listed among the VCUs with high community use values. VCUs 443 and 444, the majority of the roadless area, were listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** The area is bounded on three sides by roads and timber management activities. It has a narrow connection with Roadless Area 213 on the northeast boundary. Development has affected parts of the interior of the roadless area. There are few topographic breaks or other natural features to use as a boundary since timber harvest units are on the lower slopes of the mountains. Feasibility of management in a wilderness condition is low to moderate, due to the amount of timber management activities adjacent to this roadless area, the odd shape, relatively small size, and lack of definable boundary.

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

**(1) Recreation, Including Tourism Potential:** There is some potential for outfitter and guide permits, trails, and cabins and/or shelters. There were four outfitter/guide permits issued in 2000 (11 service days for freshwater fishing, 4 for remote setting nature tours, and 2 for black bear hunting).

**(2) Subsistence Uses:** Management as a wilderness or in an unroaded condition is not likely to affect existing subsistence uses.

**(3) Fish Resources:** No fish habitat enhancement projects are planned for this area.

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

**(5) Timber Resources:** There are approximately 7,115 acres mapped as productive old-growth forest in the roadless area. There are also 193 acres mapped as second growth due to timber harvest. Of this area, 3,987 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), 1,709 acres, or 12 percent of this roadless area are

estimated to be suitable for timber production. Approximately 703 of the suitable acres are mapped as high-volume old growth; of these acres, 122 are mapped as high-volume, coarse-canopy old growth.

A road system is already in place adjacent to most of the suitable timber and a log transfer facility exists. Nearby roads could be extended to access remaining timber.

**(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 area has low minerals potential. Although claims have been filed on locations within the area in the past, no development has occurred.

The roadless area contains an estimated 70 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:** The road on the south side of the roadless area is part of a possible transportation corridor linking Kake and Petersburg. The corridor follows existing roads, for the most part, between Kake and Twelvemile Creek, with a new road segment on the east side of the island along Frederick Sound following the shoreline, leading to a new channel-crossing ferry across Wrangell Narrows to the city of Petersburg. This road was considered in the planning process for the Southeast Alaska Transportation Plan (1999). Construction of this road was not recommended as part of the initial implementation the plan. This route is also included as a route for consideration by Southeast Conference in their ongoing assessment of long-term transportation needs for Southeast Alaska. It was recommended for further evaluation if travel demand grows. There is also a potential utility corridor following the same basic route as the transportation corridor described above and south of the roadless area that could connect Petersburg and Kake as part of a power grid for Southeast Alaska.

**(9) Water Availability and Use:** No developed recreation 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:** The area has not been identified as a potential Research Natural Area or for any other scientific purpose. There is an unusual mineral outcrop on the east side of the area.

**(11) Land Use Authorizations:** There are no special use authorizations within the roadless Area.

**(12) Land Status:** All land within the roadless area is part of the National Forest System.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Portions of the area are traditional and/or popular recreation areas.

**(b) Congressional Interest:** In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas for wilderness on the Tongass National Forest. The bill did not include this area. In 2001, HR 2908 did not propose that the roadless area be designated as wilderness. However, it does recommend that most of the roadless area be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

**(c) Public Input During Forest Plan Revision and Appeals:** There were no specific comments on this 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 on 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:** There was a concern about reducing the roadless area as part of the Todahl Backline EA and about the perceived loss of a semi-primitive recreation area. There were also general comments that roads on the island should either be maintained or closed. Many thought that there should be fewer roads. Some wanted to see helicopters used for timber harvest rather than building more roads. Other opinions were that this area should be used for timber harvest and road system development should occur.

**(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 Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 212 for permanent protection as LUD II. SEACC recommended that the remaining unlogged portions of northern Kupreanof Island (Roadless Areas 211, 212, and 213) be designated LUD II to safeguard their valuable fish and wildlife habitat important for subsistence, fishing, and hunting for residents of Kake and Petersburg.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The nearest roadless areas are the adjacent Fivemile (#213) and North Kupreanof (#211) Roadless Areas to the west. The Petersburg Creek-Duncan Salt Chuck Wilderness is located 4 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) | 100 | 105 |
| Ketchikan (Pop. 14,070) | 120 | 140 |
| Wrangell (Pop.2,308) | 45 | 45 |
| Petersburg (Pop. 3,324) | 10 | 15 |

Petersburg is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Missionary Roadless Area lies at the north end of the Lindenberg Peninsula on Kupreanof Island along the southern shore of Frederick Sound. The area is dominated by the upper portion of the Missionary Mountain Range. These mountains are characterized by steep slopes, glacial cirque lakes, and an alpine ridge line. Elevation ranges from sea level to 3,250 feet at Kane Peak. The area contains 1 mile of shoreline on Frederick Sound. There are four lakes high on the flanks of the mountains. The majority of the area is covered by forest. The roadless area is serpentine in shape and fragmented by adjacent developed areas.

The area is heavily influenced by developments and related activities on nearby lands. It is also somewhat influenced by at least three areas where helicopter yarded timber harvests have occurred in the past within the roadless area. The natural integrity and apparent naturalness of the area is moderate. The opportunity for solitude and primitive recreation is also considered moderate for the roadless area.

Approximately 35 percent of the landscape, mostly associated with Kane Peak, is considered distinctive for the character type from a scenery perspective. The area does not have any other significant or unique features or values.

The roadless area includes about 3,144 acres of high-volume, old-growth forest. Of these acres, 554 are mapped as high-volume, coarse-canopy old growth.

The Missionary Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 2 percent of the province. It is one 12 of inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The Missionary 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 an additional 30 percent is protected by other existing non-development LUDs.

The Missionary Roadless Area lies completely within the Wrangell Narrows Metasediments Ecological Subsection and represents 5 percent of the ecological subsection. The subsection is protected by existing wilderness (11 percent) and other non-development LUDs (18 percent).

The Missionary 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 four other roadless areas) among the 115 Tongass inventoried roadless areas.

There is some local and national support for management of the area in an unroaded condition, and very little support for designation of the area as wilderness. Designation would create a wilderness with very few significant or unique features, and that is heavily influenced by developments on adjacent lands. The area also includes timber sales under contract. 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 Missionary Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 43 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 57 percent. The land in the development LUDs provides an estimated 1,709 acres that are suitable for timber production (2 percent of the suitable acres on the Petersburg Ranger District). Approximately 122 of the suitable acres are classified as high-volume, coarse-canopy old growth. The timber sales that are under contract will continue. The roadless area contains an estimated 70 acres of undiscovered locatable mineral resources; all of the acres are considered to have low potential for development. The timber sales, recreation, minerals, and special use programs would continue. The values associated with the natural settings of this roadless area would be affected by ongoing developments.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. No timber harvest or related road construction would be allowed. 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. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses 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 212 (in acres) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Land Use Designation** | **Alt 1** | **Alt 2** | **Alt 3** | **Alt 4** | **Alt 5** | **Alt 6** | **Alt 7** | **Alt 8** |
| **Recommended Wilderness** | | | | | | | | 14,825 |
| **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** | 6,409 | 6,409 | 6,409 | 6,409 | 6,409 | | 6,409 | |
| **Semi-remote Recreation** | | | | | | | | |
| **Recommended LUD II** | | | | | | 14,825 | | |
| **LUD II** | | | | | | | | |
| **Wild, Scenic, Recreational River** | | | | | | | | |
| **Experimental Forest** | | | | | | | | |
| **Scenic Viewshed** | 4,571 | 4,571 | 4,571 | 4,571 | 4,571 | | 4,571 | |
| **Modified Landscape** | 3,376 | 3,376 | 3,376 | 3,376 | 3,376 | | 3,376 | |
| **Timber Production** | 469 | 469 | 469 | 469 | 469 | | 469 | |
| **TOTAL** | **14,825** | **14,825** | **14,825** | **14,825** | **14,825** | **14,825** | **14,825** | **14,825** |
| **Suitable Timber Lands** | 1,709 | 1,709 | 1,709 | 1,709 | 1,709 | 0 | 1,709 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Five Mile (213)

**ACRES (NFS):** 19,284

**BIOGEOGRAPHIC PROVINCE:** Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 23

### I. Overview and Description

**(1) Location and Access:** The Five Mile Roadless Area lies along the eastern shore of the Lindenberg Peninsula on Kupreanof Island on the northeastern edge of the Petersburg Creek-Duncan Salt Chuck Wilderness and includes the Sukoi Islands. This area is accessed primarily by saltwater. Logging roads from Portage Bay access the west and north portions. The community of Kake lies 30 air miles to the west, and the community of Petersburg lies less than 2 air or water miles south of the southern tip. Petersburg and Kake are served by the Alaska Marine Highway, and Petersburg has daily jet service. Neither of these communities is connected to the area by road. There are no sites suitable for landing wheeled aircraft or floatplanes in the interior of this area. Access is by foot or helicopter. The Petersburg Mountain Trail, which provides access into the southern part of this area, is readily accessible from the state dock in the city of Kupreanof, across Wrangell Narrows from the city of Petersburg.

**(2) History:** The area lies within the traditional territory of the Stikine Tlingit. Known cultural resources in the area include historic period cabins, fur farms, homesteads, culturally modified trees, prehistoric period fish traps, villages, and camps. No cultural resources have been identified in the area interior aside from blazed trees around Colp Lake. Recreation use in the area is moderate. A developed trail leads from saltwater to Colp Lake and another extends from the City of Kupreanof up the southeast face of Petersburg Mountain.

**(3) Geography and Topography:** The Five Mile Roadless Area includes distinctive alpine topography exhibiting steep mountain peaks rising from saltwater. To the north, Scott, Sheridan, and Sherman Peaks are above 3,400 feet. Centered in this basin is Five Mile Creek draining to the east from Colp Lake and originating near the base of Sherman Peak. Several other small lakes near Scott Peak form smaller steep and shallow drainages also feeding into Five Mile Creek. Most of the area has a uniform forest canopy below 2,200 feet with slopes of moderate steepness. The area contains about 15 miles of shoreline on saltwater. Offshore, three Sukoi Islands account for 205 acres of this roadless area, and approximately 1,281 acres are alpine environment. Islands account for 205 acres of the area, two of which are larger than 50 acres. There are no mapped acres of ice or rock features.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province. Rolling, subdued topography and extensive muskeg areas generally characterize this province, but it also has rugged terrain in localized areas.

Ecological Section/Subsection. The Five Mile Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), Wrangell Narrows Metasediments Ecological Subsection (see table below). Mountains of sedimentary origin have been extensively reshaped by glaciers and glacial deposition. Slopes are forested with hemlock, spruce, and cedar while lodgepole pine and mixed-conifer stands are found in poorly drained soils. Wetlands are common in low relief, depositional areas. Thick peat deposits have accumulated in some sites with poor drainage (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Wrangell Narrows Metasediments | 100% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg. Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky. Approximately 39 percent of the Five Mile Creek watershed is Soil Class IV, which has a very high potential for mass movement.

**(c) Vegetation:** 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. Muskeg/forested wetland timber complexes are interspersed with mature mixed conifer plant communities on better-drained sites along creeks and on steeper slopes. Western hemlock, Sitka spruce, and Alaska-cedar plant communities dominate timbered hill slopes. Minor amounts of redcedar are present. There are 1,281 acres of alpine vegetation mapped in this area.

There are approximately 16,976 acres mapped as forest land of which 8,247 acres or 49 percent are mapped as productive old-growth forest. Of the productive old growth, 3,977 acres or 48 percent are mapped as high-volume old-growth forest. The productive old growth includes about 734 acres of high-volume, coarse-canopy old growth. There is no second-growth forest mapped within the roadless area.

**(d) Fish Resources:** Fish resources were rated by the Alaska Department of Fish and Game (ADF&G) in it's Habitat Integrity Program (1983). These ratings describe the value of VCUs for sport fish, commercial fish, and estuaries. One VCU, 447, was rated as high value for sport fish. Five Mile Creek is the only ADF&G numbered stream in this area. This stream supports runs of steelhead and cutthroat trout; Dolly Varden char; and pink, chum, and coho salmon.

**(e) Wildlife Resources:** Sitka black-tailed deer and moose are present, and black bears are abundant. Historically, Kupreanof Island has been known for moderate to high Sitka black-tailed deer populations. In the late 1960s and early 1970s, the central portion of Southeast Alaska experienced a decline in deer populations. Populations on the island are increasing. Recent surveys of moose indicate a growing moose population here. Wolves are located across all habitat types. Mink, river otters, beaver, porcupine, marten, ermine, red squirrel, mice, shrews, and voles are well distributed. Fishers and wolverines are incidental species. The northern flying squirrel has been migrating to Kupreanof Island but is not yet well distributed on the island; some may occur within this roadless area.

Bald eagles, northern goshawks, red-tailed hawks, sharp-shinned hawks, species of owls, spruce grouse, and ptarmigan all occur within the roadless area. Bats are present during the summer months and may over-winter. Numerous bald eagles nest along this coastline.

Numerous species of ducks and geese, trumpeter swans, marbled murrelets, sandhill cranes, and great blue herons may use this roadless area, both during migration and, in some cases, during the nesting season.

Many species of birds are present. Red-throated, Pacific, and common loons all occur on Kupreanof Island. Several plover, yellowlegs, and sandpiper species occur, mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit

thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Amphibians known to occur on Kupreanof Island include the rough-skinned newt and western toad. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts.

Sea mammals known to inhabit the waters surrounding Kupreanof Island are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal.

**(5) Management Direction and Current Uses:** This area was allocated to six Land Use Designations (LUDs) in the 1997 Tongass Land and Resource Management Plan. These six LUDs are Scenic Viewshed, Timber Production, Modified Landscape, 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 |
|---|---|
| Scenic Viewshed | 7,997 |
| Timber Production | 6,657 |
| Modified Landscape | 1,207 |
| Transportation and Utility System | NA |
| Old-growth Habitat | 2,078 |
| Semi-remote Recreation | 1,344 |

Approximately 82 percent of this roadless area (not including the LUD overlay) was allocated to a development LUD (Scenic Viewshed, Timber Production, Modified Landscape). The coastline along Frederick Sound and the Five Mile Creek area was allocated to the Scenic Viewshed LUD, which accounts for approximately 41 percent of the roadless area. The Timber Production LUD was assigned to west portions of the area, adjacent to the Petersburg Creek-Duncan Salt Chuck Wilderness and accounts for approximately 35 percent of the roadless area. Approximately 6 percent of the roadless area was allocated to the Modified Landscape LUD, located in the less visible areas west of Frederick Sound. The TUS LUD overlay includes possible transportation and utility corridors for the Kake-Petersburg connection, which would need to go through this area since it is adjacent to the wilderness.

Approximately 18 percent of the roadless area was allocated to a non-development LUD (Old Growth Habitat, Semi-remote Recreation). The Old-growth Habitat LUD was assigned to approximately 11 percent of the roadless area. Land with this LUD is located north of Five Mile Creek and adjacent to Frederick Sound. The southeastern tip of the roadless area, adjacent to non-National Forest System lands was allocated to the Semi-remote Recreation LUD, accounting for approximately 7 percent of the roadless area. The Sukoi Islands are also in the Semi-remote Recreation LUD. In most of this roadless area, analysis is on-going for the Scott Peak Project Area, which plans to harvest timber and may construct roads. Some helicopter logging may occur. No definite units have been proposed at this time.

The Forest Plan identified a potential powerline corridor across the roadless area to connect Kake with Petersburg. A tentative road corridor has been identified along the shoreline as part of a possible connection of Petersburg to Kake. There is high local public controversy about this possible connection.

The Sukoi Islands lie in a primary marine route for pleasure and commercial boat traffic. This includes the Alaska State ferries, which cruise between the islands and view much of this roadless area. Navigation makers are maintained in the vicinity of the islands.

Recreation use includes hiking, viewing scenery, camping, bear hunting, deer hunting, trout fishing, and seakayaking. Two trails exist in the area, both beginning at saltwater. The Petersburg Mountain Trail receives

relatively heavy use and climbs up to Petersburg Mountain. The Colp Lake Trail receives light use and accesses Colp Lake. Use is primarily by day users from nearby Petersburg.

Several small buildings exist on two private parcels of land at the mouth of Five Mile Creek.

**(6) Appearance (Apparent Naturalness):** The area is essentially unmodified. It is visible from major marine travel routes and provides a backdrop for the city of Petersburg. Areas along the western boundary are affected by timber harvest and associated roads. Timber harvest on non-National Forest System lands along the southeast boundary may affect the apparent naturalness of the area

**(7) Surroundings (External Influences):** The northern end of the Lindenberg Peninsula is roaded and connected to Portage Bay. To the east is saltwater (Frederick Sound) which receives heavy boat traffic. To the southeast, this roadless area adjoins State of Alaska lands and the community of Kupreanof (West Petersburg). These State lands are managed to provide revenue to support the State Mental Health Trust. Across Wrangell Narrows from the city of Kupreanof is the city of Petersburg. Immediately to the south is the Petersburg Creek-Duncan Salt Chuck Wilderness.

**(8) Attractions and Features of Special Interest:** The area contains six inventoried recreation places that cover 1,237 acres, or 6 percent of the roadless area. The area is immediately adjacent to saltwater. Major creeks are valued for recreation uses such as black bear hunting and hiking. Sport fishing is popular around the Sukoi Islets. Colp Lake Trail includes views of glaciers and ice fields on the mainland. The Petersburg Mountain Trail is accessible from the state dock in Kupreanof, across Wrangell Narrows from the city of Petersburg and provides access to alpine areas.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** There have been two small changes to the roadless area. The northern boundary has been moved north a short distance closer to Twelvemile Creek. This is a more definable boundary for the roadless area. Also, the Sukoi Islands, three small islands off the coast, are included in the roadless area. In the southeast corner, 600 acres were conveyed to the State in 1996.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is unmodified, with the minor exception of the hiking trail to Colp Lake and Petersburg Mountain, and is suitable for wilderness classification.

**(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 Five Mile Roadless Area once one is a short distance from the west and east boundaries. Use of floatplanes and motorboats may disrupt visitors for brief periods. Present recreation use levels are low to moderate in specific locations adjacent to the major creeks and drainages. A visitor camped on the beach may see or be seen by fishing boats and other marine traffic offshore. The Petersburg Mountain Trail is accessible from the state dock in Kupreanof, across Wrangell Narrows from the city of Petersburg. This roadless area is adjacent to the Petersburg Creek-Duncan Salt Chuck Wilderness Area.

Landforms along this area are characterized by an anadromous stream and steeply-rising mountain slopes with small icefields. The highest peaks rise to 3,900 feet from saltwater. This makes travel through the area 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 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 and semi-primitive 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) | 5,463 | 28% |
| Semi-Primitive Non-Motorized (SPNM) | 4,657 | 24% |
| Semi-Primitive Motorized (SPM) | 7,211 | 37% |
| Roaded Modified (RM) | 1,953 | 10% |

The area contains six inventoried recreation places that cover 1,237 acres, or 6 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| P | 2 | 609 |
| SPNM | 0 | 0 |
| SPM | 4 | 627 |
| RM | 0 | 0 |

Except for the Petersburg Mountain and Colp Lake trails, there are no developed recreation facilities in the area. Major creeks are valued for recreation uses such as black bear hunting, hiking, and beach combing. Sport fishing is popular around the Sukoi Islands.

**(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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Five Mile Roadless Area was given a rating of 25 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 23. The new rating reflects the effects associated with developments on the northwest side of the area and use and activities associated with the relatively close proximity to Petersburg.

**(4) Ecologic and Geologic Values:**

**(a) Fish Resources:** VCU 447 (Five Mile Creek drainage) has a small segment in this roadless area and it is listed as a primary salmon and sportfish producer. The rest of the area is listed as a secondary producer of salmon (ADF&G, 1998). Five Mile Creek, the only ADF&G numbered stream in this area, has an average annual peak escapement of 4,000 pink salmon. Petersburg anglers often fish in the stream.

**(b) Wildlife Resources:** Historically, Kupreanof Island has been known for moderate to high Sitka black-tailed deer populations and this roadless area is where many Petersburg residents hunted deer. In the late 1960s and early 1970s, the central portion of Southeast Alaska experienced a decline in deer populations. Populations on the island are increasing. Recent surveys indicate a growing moose population here. The forested area provides habitat for marten and its prey, mice, voles, and red squirrel. There are numerous bald eagles nests along this coastline. Northern goshawks have been sighted in this area. Surveys in adjacent areas report a plentiful population of porcupines.

Numerous species of ducks and geese, trumpeter swans, marbled murrelets, sandhill cranes, and great blue herons have been seen within this roadless area, both during migration and, in some cases, during the nesting season. The estuary at Five Mile Creek is important habitat and a waterfowl hunting area, as well as, for black bear hunting.

Many species of birds are present although access limits the area for bird-viewing. The extent that this area is used by migratory birds is unknown. Humpback whales, orcas, and Steller sea lions are often seen in Frederick Sound adjacent to this roadless area. Sea lions use the Sukoi Islands for a haul-out.

**(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). Humpback whales are abundant in Frederick Sound. Steller sea lions routinely haul out on the Sukoi Islands. 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 sighted in the general area. In addition, 12 sensitive plant species are known or suspected to occur in the Petersburg Ranger District

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

**(5) Scientific and Educational Values:** No unique scientific or educational values have been identified in the area.

**(6) Scenic Values:** Most of the area is in a natural state, including Five Mile Creek, and steeply-rising mountain slopes. The highest peaks rise to 3,900 feet from the saltwater in Frederick Sound. Features in the southern portion of the area form a backdrop for Petersburg and the marine gateway from the north.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Frederick Sound, a part of the Alaska Marine Highway, a tour ship route, and a saltwater use area and Colp Lake Hiking Trail #461.

Forty-seven percent of this roadless area is inventoried Variety Class A (possessing landscape diversity that is unique for the character type). About 49 percent is inventoried as Variety Class B (possessing landscape diversity character is common for the character type). About 2 percent is inventoried Variety Class C (possessing a low degree of landscape diversity). The remaining 2 percent is not inventoried.

The majority of this roadless area (85 percent) is rated with the Existing Visual Condition (EVC) Type I, where only ecological change has occurred. About 13 percent of the area is rated as an EVC Type V, where changes in the landscape are obvious to the average person and appear to be major disturbances. The remaining 2 percent is not inventoried.

**(7) Social, Cultural, and Historical Values:** The area lies within the traditional territory of the Stikine Tlingit. Known cultural resources in the area include historic period cabins, fur farms, homesteads, culturally modified trees, prehistoric period fish traps, villages and camps. Evidence of past use suggests the area was used more extensively both historically and prehistorically than current trends. The identified cultural resources lie in beach fringe areas that are generally protected from forest projects by buffers that prohibit project-related disturbances. The presence of developed trails promotes some non-coastal use of the area. VCUs 444, 446 and 447, almost the entire roadless area, are listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas. No significant acreage is listed among the VCUs with high community use value (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** Areas to the northwest are bounded by roads and harvest areas and there is no easily definable boundary. The east is well defined by saltwater. The Petersburg Creek-Duncan Salt Chuck Wilderness lies to the south. Non-National Forest System lands lie to the southeast.

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

**(1) Recreation, Including Tourism Potential:** Recreation potential for the Five Mile area is moderate to high. Use of the developed trails is primarily by residents of Petersburg or Kupreanof. Additional trails, cabins, and shelters all have potential. The area displays a wide variety of settings, from offshore islands to alpine, in a compact area that is easily accessible from Petersburg and Kupreanof. There was one outfitter/guide permit issued in 2000 (2 service days for black bear hunting). Maintenance of this area in a roadless condition enhances the opportunity to manage the adjacent Petersburg Creek-Duncan Salt Chuck Wilderness. It also maintains existing recreation opportunities and the visual backdrop for the towns of Petersburg and Kupreanof.

**(2) Subsistence Uses:** Management as a wilderness or in an unroaded condition will not affect subsistence uses.

**(3) Fish Resources:** No fish habitat enhancement projects are planned at this time.

**(4) Wildlife Resources:** No wildlife habitat improvement projects are planned in the area at this time.

**(5) Timber Resources:** There are approximately 8,247 acres mapped as productive old-growth forest and no acres mapped as second growth due to harvest in the roadless area. Of this area, 4,885 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), 2,232 acres, or 12 percent of this roadless area are estimated to be suitable for timber production. Approximately 896 of the suitable acres are mapped as high-volume old growth; of these acres, 255 are mapped as high-volume, coarse-canopy old growth.

There are good timber values in this area; however, high roading costs and high scenic values will need to be recognized. An additional log transfer facility would be desirable to lessen the haul cost to Portage Bay, the nearest log transfer facility.

**(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 areas with potential mineral development potential in the area.

**(8) Transportation and Utilities:** A possible transportation corridor has been identified along the shoreline to connect the Lindenberg Peninsula to Portage Bay, and possibly to Kake. Also, there is a potential powerline that would cross the roadless area in order to link Kake with the existing powerline on Mitkof Island. Wilderness designation could preclude development of these facilities.

**(9) Water Availability and Uses:** No developed recreation 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:** The area contains no Research Natural Areas and has not been identified for any other scientific value. There are opportunities to study forests, fish, wildlife, and geologic processes in an area close to Petersburg.

**(11) Land Use Authorizations:** A special use permit exists for an electronics site on a ridge just south of Petersburg Mountain.

**(12) Land Status:** All land within the roadless area is part of the National Forest System. Six hundred acres were conveyed to the State in 1996.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Interest has developed in this roadless area concerning potential road access from Kake to Kupreanof, and a potential powerline between Kake and Petersburg.

**(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 bill did not include this area. In 2001, HR 2908 did not propose that this roadless area be designated as wilderness. However, it does recommend that most of the roadless area be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

**(c) Public Input During Forest Plan Revision and Appeals:** There were no specific comments on this roadless area. However, negative comments were received regarding the proposed road connection that passes through the 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 on 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, while others wanted some areas developed.

**(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 Kupreanof said they would like this area added to the Petersburg-Duncan Salt Chuck Wilderness. They are interested in developing a loop trail that connects with the Kupreanof waterfront trail and with Petersburg Creek. They indicated that this trail would take 2-3 days to hike and would be unique in Southeast Alaska; it would be a lengthy hiking loop and would be easily accessible by tourists.

The mayor of Wrangell is opposed to wilderness designation of this area because it would preclude cost-effective transportation and electrical intertie connection to Kake and Sitka.

SEACC recommended that the remaining unlogged portions of northern Kupreanof Island (Roadless Areas 211, 212, and 213) be designated LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 213 for permanent protection as LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The western and southern boundaries of the Five Mile Roadless Area adjoin the eastern and northern boundaries of the Petersburg Creek-Duncan Salt Chuck Wilderness area. The remaining roadless units on Kupreanof Island are separated from the Five Mile Roadless Area by saltwater or roaded areas. Overall, this area receives moderate recreational use.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 105 | 110 |
| Petersburg (Pop. 3,224) | 2 | 3 |
| Wrangell (Pop. 2,308) | 35 | 35 |
| Ketchikan (Pop. 14,070) | 110 | 130 |

Petersburg is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Five Mile Roadless Area lies along the eastern shore of the Lindenberg Peninsula on Kupreanof Island on the northeastern edge of the Petersburg Creek-Duncan Salt Chuck Wilderness and includes the Sukoi Islands. Landforms along this area are characterized by Five Mile Creek and steeply-rising mountain slopes. The peaks rise to 3,900 feet from saltwater. The area contains about 15 miles of shoreline on saltwater. The Petersburg Mountain Trail, which enters the southern portion of the area, is readily accessible from the state dock in Kupreanof, across Wrangell narrows from the city of Petersburg.

The roadless area is relatively small 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.

Approximately 47 percent of the landscape of the area is considered distinctive for the character type from a scenery standpoint. The area is within 2 miles of Petersburg and can be accessed by trail from Kupreanof across the channel from Petersburg.

The roadless area includes about 3,977 acres of high-volume, old-growth forest. Of these acres, 734 are mapped as high-volume, coarse-canopy old growth.

The Five Mile Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 2 percent of the province. It is one of 12 inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The Five Mile 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 an additional 30 percent is protected by other existing non-development LUDs.

The roadless area lies completely within the Wrangell Narrows Metasediments Ecological Subsection and represents 6 percent of the ecological subsection. The subsection is protected by existing wilderness (11 percent) and other non-development LUDs (18 percent).

The Five Mile 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 seven other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for management of the area in an unroaded condition, and there is little support for designating the area as wilderness. Designation would create a wilderness that would be an extension of the Petersburg Creek-Duncan Salt Chuck Wilderness, which lies directly south and west of the area. The area includes a transportation and powerline corridor important to future connection between Petersburg and Kake. The powerlines will be part of the overall future power grid important to Southeast Alaska and its communities. 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 Five Mile Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 18 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 82 percent. The land in the development LUDs provides an estimated 2,232 acres that are suitable for timber production (1 percent of the suitable acres on the Petersburg Ranger District). Approximately 255 of the suitable acres are classified as high-volume, coarse-canopy old growth. Planning for the State road and power grid connection between Kake and Petersburg would continue. The timber sales, recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area would be affected by the ongoing developments allowed by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, transportation and utility planning, minerals, and special use programs would continue similar to current conditions. No timber harvest would be allowed. Although LUD II designation would not expand the Petersburg Creek-Duncan Salt Chuck Wilderness as such, it would provide for long-term management in a mostly natural condition. Much of 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. No timber harvest would be allowed. The ongoing recreation, transportation and utility planning, minerals, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area as wilderness would extend the Petersburg Creek-Duncan Salt Chuck Wilderness to the north and east. 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 213 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 19,284 |
| 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 | 2,078 | 2,078 | 2,078 | 2,078 | 2,078 | | 2,078 | |
| Semi-remote Recreation | 1,344 | 1,344 | 1,344 | 1,344 | 1,344 | | 1,344 | |
| Recommended LUD II | | | | | | 19,284 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 7,997 | 7,997 | 7,997 | 7,997 | 7,997 | | 7,997 | |
| Modified Landscape | 1,207 | 1,207 | 1,207 | 1,207 | 1,207 | | 1,207 | |
| Timber Production | 6,657 | 6,657 | 6,657 | 6,657 | 6,657 | | 6,657 | |
| **TOTAL** | **19,284** | **19,284** | **19,284** | **19,284** | **19,284** | **19,284** | **19,284** | **19,284** |
| Suitable Timber Lands | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 0 | 2,232 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** South Kupreanof (214)

**ACRES (NFS):** 213,122

**BIOGEOGRAPHIC PROVINCE:** Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Kupreanof Lowlands

**2003 WILDERNESS ATTRIBUTE RATING:** 24

### I. Overview and Description

**(1) Location and Access:** The South Kupreanof Roadless Area occupies most of the southern half of the island. Petersburg is approximately 10 air miles to the east and the community of Kake is 15 air miles to the northwest. Petersburg and Kake are served by the Alaska Marine Highway and Petersburg has daily jet service. The South Kupreanof Roadless Area is accessible primarily from saltwater (in upper Duncan Canal, Sumner Strait, or the southern end of Keku Strait) by boat or floatplane. Very few good anchorages are located along the southern shoreline (along Sumner Strait) and within Duncan Canal. Several of the inland lakes are large enough to land small floatplanes. A road has been built near the northern center of the roadless area and connects to the community of Kake. There are no sites suitable for landing wheeled aircraft. Access to other portions of the area is by foot or helicopter,

**(2) History:** The area lies within the traditional territory of the Kake and Stikine Tlingit. An extensive cultural resource survey has occurred along the southern and southwestern coast of the area. Identified archaeological sites include historic period cabins, fur farms, and a saltery. Culturally modified trees dot the shoreline and historic period mining has occurred in the area interior. Prehistoric period sites include fish traps, villages and camps. No known significant sites are located in the area interior. There are extensive areas of beach logging along the coast. Some beach logging areas with road constructed along the southeastern coast abut the roadless area. In the late 1990s, a road was constructed into the middle of the area from the north and some timber was harvested; this road is under contract and is still being constructed as part of the Four Leaf Timber Sale.

**(3) Geography and Topography:** This roadless area is characterized by moderately steep hills and ridges typically less than 1,500 feet in elevation. A few peaks in the area are over 2,000 feet. The many small drainages created by the dissected ridgelines generally flow in a southerly direction towards Totem Bay. Many muskeg openings exist; some are quite large. Spruce-hemlock forest is typical, and is found on the ridge slopes and drainage bottoms forming string-like patterns scattered across the landscape. Two major watersheds, Kushneahin and Irish Creeks, begin from lakes. Two others, Castle River and Tunehean Creek, have headwaters in this area. The area contains 107 miles of shoreline on saltwater. Freshwater lakes are mapped on approximately 604 acres. The major lakes are Kushneashin Lake in the southwest, Irish Lakes, Kluane Lake in the central section near the recent addition of Road 6314, and Towers Lake in the northeast. Alpine habitat occupies about 1,313 acres, and there is very little rock surface mapped as 79 acres. There are no ice or snowfield features mapped in this area. Islands and islets account for approximately 462 acres of the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province. The area typifies the low-lying, rolling terrain with little relief and rounded gentle ridges characteristic of this province. There are no known unique geologic formations or plant/soil associations.

Ecological Section/Subsection. The South Kupreanof Roadless Area is contained entirely within the Kupreanof Lowlands Ecological Section (M246G). These areas are represented by three ecological

subsections (see table below). The Sumner Strait Volcanics Ecological Subsection represents the majority of the South Kupreanof Roadless Area. Water-resistant volcanic flows of relatively recent origin arise from lowland glacial deposits. The interplay of volcanic and glacial forces have left a landscape of shallow organic soils on long, gentle slopes and mineral soils on short, steep slopes. Productive hemlock, Alaska yellow cedar, and spruce forests are found on the steep slopes. The Duncan Canal Till Lowlands Ecological Subsection covers a quarter of the roadless area and is the other significant subsection within the South Kupreanof Roadless Area. The low relief, high precipitation, and depositional soils have produced an abundance of wetlands on poorly drained sites. Productive forests are limited to slopes and riparian areas with mineral soil (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kupreanof Lowlands | Sumner Strait Volcanics | 75% |
| | Duncan Canal Till Lowlands | 23% |
| | Kake Volcanics | 2% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Extensive muskeg forested wetland timber complexes are interspersed with mixed conifer plant communities of western hemlock, Sitka spruce, and yellow-cedar on better-drained sites. There are 10,686 acres of muskeg mapped within this area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Western hemlock and Alaska-cedar plant communities dominate timbered hill slopes. Minor amounts of redcedar are present, but this roadless area is near the northern extent of the range for redcedar. The south-central and southeastern portions have predominantly muskeg mosaic systems. The southwestern section has most of the forested areas. There are about 1,313 acres of alpine vegetation mapped within the area.

There are approximately 197,902 acres mapped as forest land of which 81,989 acres or 41 percent are mapped as productive old-growth forest. Of the productive old growth, 22,405 acres or 27 percent are mapped as high-volume old-growth forest. The productive old growth includes about 4,546 acres of high-volume, coarse-canopy old growth. There are about 2,108 acres of second-growth forest where timber harvest has occurred in the past mostly the result of beach harvest in the past.

**(d) Fish Resources:** The area contains either the entire stream or the headwaters of approximately 20 ADF&G-numbered salmon producing streams. The most important include Kushneahin Creek, Irish Creek, Tunehean Creek and the headwaters of Castle River. These streams support runs of pink, chum, coho, and sockeye salmon and steelhead trout along with resident fish species of cutthroat and Dolly Varden char.

**(e) Wildlife Resources:** Sitka black-tailed deer and moose are present, and black bears are abundant. Wolves are located across all habitat types. Mink, river otters, beaver, marten, ermine, red squirrel, mice, shrews, and voles are well distributed. Fishers and wolverines are incidental species. A mountain lion was once trapped near Totem Bay; however, this species is considered a rare migrant on Mitkof and Kupreanof Islands and the Alaska portion of the mainland. The northern flying squirrel has been migrating to Kupreanof Island but is not yet well distributed on the island; some may occur within this roadless area.

Bald eagles, northern goshawks, red-tailed hawks, sharp-shinned hawks, species of owls, spruce grouse and ptarmigan all occur within the roadless area. Bats are present during the summer months and may over-winter. The American peregrine falcon may migrate through the district, and can be found around large shorebird population areas. The bays are important waterfowl habitat areas.

Numerous species of ducks and geese, trumpeter swans, marbled murrelets, sandhill cranes, and great blue herons have been seen within this roadless area, both during migration and, in some cases, during the nesting season. Harlequin ducks have been observed on Sumner Strait.

Many species of birds are present. Red-throated, Pacific, and common loons all occur on Kupreanof Island. Several plover, yellowlegs, and sandpiper species occur, mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Amphibians known to occur on Kupreanof Island include the rough-skinned newt and western toad. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock-spruce forests and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock-spruce forests, and in clearcuts.

Sea mammals known to inhabit the waters surrounding Kupreanof Island are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal. Sea otters are migrating into the Inside Passage area and have been sited in Sumner Strait south of the roadless area.

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

| LUD | Acres |
|---|---|
| Timber Production | 164,438 |
| Modified Landscape | 3,916 |
| Scenic Viewshed | 943 |
| Transportation and Utility System | NA |
| Semi-remote Recreation | 13,003 |
| Old-growth Habitat | 30,572 |
| Remote Recreation | 250 |

Approximately 80 percent of the roadless area was allocated to a development LUD (Timber Production Modified Landscape, Scenic Viewshed). Most of this roadless area, approximately 77 percent, was allocated to the Timber Production LUD. This LUD is located in the interior area out to the coastline of Keku Strait and Sumner Straits, including the area adjacent to Totem and Douglas Bays. The Modified Landscape LUD was assigned to approximately 2 percent of the roadless area, located mostly in the northwest part of the area out through east of Keku Strait. The northwest part of this roadless area near Keku Strait was also designated to the Scenic Viewshed LUD, accounting for less than 1 percent of the roadless area. The TUS LUD overlay traverses from Duncan Canal west to the existing road system on to Kake. This represents a potential utility corridor that could link Kake into a Southeast Alaska power grid.

Approximately 20 percent of the roadless area was allocated to a non-development LUD (Semi-remote Recreation, Old-growth Habitat, Remote Recreation). The Semi-remote Recreation LUD was assigned to approximately 6 percent of the roadless area. The Semi-remote Recreation LUD is located along the tidal flats of Towers Arm and upper Duncan Canal, around Towers Lake and Upper Keku Creek. Numerous small islands around the roadless area were also allocated to this LUD. Approximately 14 percent of the roadless area was allocated to the Old-growth Habitat LUD. This LUD is represented by eight small Old-growth Habitat reserves each with about 2,000 to 3,000 acres depending on the size of the watershed.

Three major fish enhancement projects, including two fish ladders, have been constructed on the Irish and Keku Creek system. A steppass fish ladder was constructed on Upper Keku Creek in 1985.

The Clover Timber Sale expanded the road system and harvested timber in this area during the late 1990s. Four Leaf and Shamrock Timber Sales are currently under contract and includes harvesting timber and the construction of new road. Harvesting and roading will occur primarily in the northern half of VCU 429 (Irish Creek). Douglas Timber Sale is currently being analyzed and includes most of the southern portion of this roadless area. Other timber harvest projects are planned in later years and are on the 10-year timber resource schedule.

Overall, this roadless area receives low to moderate recreational use, depending on which part of the roadless area. Recreation use includes bear, deer, moose, and waterfowl hunting; coho salmon, pink salmon, steelhead, and trout fishing; beachcombing; seakayaking; camping, recreation cabin use; and viewing from marine access. Agate Beach is popular with independent travelers and medium size cruise ships. The Irish Lakes are accessed from the new piece of the 6314 road for hunting and fishing. Black bear hunting occurs all along the shoreline, especially with the recent hunting closures on Kuiu Island. The Towers Arm Cabin receives light use. Sea kayak paddling and camping occur along all of the shoreline. However, parts of the interior are not used at all for recreation or hunting since the only access is by foot or helicopter and other areas are more desirable for these activities.

**(6) Appearance (Apparent Naturalness):** Natural appearance dominates the landscape, except for the beach area along Keku and Sumner Straits which appears modified due to past beach logging. Also, the apparent naturalness of the area adjacent to recent road building and timber harvest has been adversely affected.

**(7) Surroundings (External Influences):** South Kupreanof Roadless Area is mostly surrounded by other roadless areas. The area is east of Rocky Pass Roadless Area (243) and west of Castle Roadless Area (215) on Kupreanof Island. The North Kupreanof Roadless Area (211) and a developed area southeast of Kake lie to the north. On the northeast corner, it adjoins the Petersburg Creek-Duncan Salt Chuck Wilderness area. The boundary in the south is the shoreline along Sumner Strait, which was not considered part of the 1990 roadless area due to the beach logging that occurred in the late 1960s through the mid-1970s. Road construction is occurring in the northern portion and is planned for the southern part. The area is relatively flat, lessening the external influence on the interior of the roadless area.

**(8) Attractions and Features of Special Interest:** The area contains 17 inventoried recreation places that cover 24,470 acres, or 11 percent of the roadless area. The areas immediately adjacent to saltwater and major creeks are highly valued for recreation uses such as black bear and waterfowl hunting, camping, trapping, beach combing, and sport fishing. Beaches between Point Barrie and Totem Point are made up of small multi-colored and agate-like stones. This area attracts visitors, both on small cruise ships and charter boats as well as independent boaters. Stone columns produced by erosion formed the "totems" at the head of Totem Bay. The Forest Service once maintained a recreation cabin at Towers Lake. Sport fishing occurs on major streams and black bear hunting mostly occurs on the shoreline and near streams.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The boundary in the south has been expanded to include older harvest units, which are 30 to 40 years old along the shoreline. This area has been added into the roadless area because it does not contain roads and because trees have revegetated the harvest units. A road has been extended towards the center of the roadless area from the north. Some units along the road have been harvested. This corridor has been dropped from the roadless area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** Most of the South Kupreanof Roadless Area is unmodified. The beach area, where logging has occurred in the past, and areas adjacent to recent road building and timber harvest appear modified. However, tree growth in areas harvested in the 1960s and 1970s along the beach has mostly restored the natural appearance of the area although these units are still noticeable. Classification as wilderness is suitable because natural and unmodified appearance dominate the landscape.

**(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 South Kupreanof Roadless Area. Use of floatplanes and motorboats may disrupt visitors on the shore for brief periods, but a person camped or traveling inland is unlikely to encounter others. Travel on land is moderately difficult, offering a moderately high degree of physical challenge. 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.

Agate Beach is popular with independent travelers and small to medium-size cruise ships. The Irish Lakes are accessed from the new road for hunting and fishing. Black bear hunting occurs all along the shoreline, especially with hunting closures on Kuiu Island. The Towers Arm Cabin receives light use. Sea kayak paddling and camping occur along all of the shoreline.

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) | 151,875 | 71% |
| Semi-Primitive Non-Motorized (SPNM) | 38,863 | 18% |
| Semi-Primitive Motorized (SPM) | 9,721 | 5% |
| Roaded Modified (RM) | 12,662 | 6% |

The area contains 17 inventoried recreation places that cover 24,470 acres, or 11 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 4 | 2,092 |
| SPNM | 3 | 11,636 |
| SPM | 4 | 7,632 |
| RM | 8 | 3,110 |

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

Present recreation use levels are low. There are two public recreation cabins in the area, one of which is out of service. Although upper Castle River does not have developed recreation sites, two Forest Service cabins and Hiking Trail # 459 are located downstream around Castle Flats, in Roadless Area 215.

**(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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the South Kupreanof Roadless Area was given a rating of 26 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 24. The new rating reflects the extension of the road system into the interior of the roadless area from the north and into the upper watershed of the Castle River.

**(4) Ecologic and Geologic Values:**

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 429, 432, and 436 as primary producers of salmon, and VCU 436 as a primary producer of sportfish.

Castle River is a very popular sport fishing area for coho, and has high commercial and sport fish values for coho salmon, steelhead, and cutthroat trout. ADF&G lists Castle River as one of the top 19 "high quality watersheds" in Southeast Alaska. The large amount of spawning and rearing habitat in the river, contribute to its importance for commercial and sport fishing.

Irish and Keku Creeks have high commercial value for coho salmon and sport value for steelhead. Keku Creek drainage is an important rearing area for juvenile coho salmon. Irish Lakes support populations of cutthroat trout and kokanee salmon. Three major fish enhancement projects, including two fish ladders, have been constructed on the Irish and Keku Creek system. A steppass fish ladder was constructed on Upper Keku Creek in 1985.

Tunehean Creek has high commercial and sport fish values for coho salmon and steelhead. Zim Creek is considered to have very good coho salmon smolt capability. Outfitters and guides use the creek for steelhead. ADF&G lists this stream as significant overwintering habitat for Dolly Varden, and a significant steelhead stream.

Kushneahin Creek has high sport fish value for sockeye and steelhead, and steelhead value of regional significance. The system also has limited habitat for coho salmon.

**(b) Wildlife Resources:** Historically, South Kupreanof Island has been known for moderate to high Sitka black-tailed deer populations. In the late 1960s and early 1970s, the central portion of Southeast Alaska experienced a decline in deer populations. Populations on the island are increasing. Recent surveys indicate a growing moose population here. Kushneahin Creek has a significant black bear population. Some trapping occurs along the southern coastline. A mountain lion was once trapped near Totem Bay; however, this species is considered a rare migrant on Mitkof and Kupreanof Islands and the Alaska portion of the mainland.

There are known goshawk, red-tailed hawk, sharp-shinned hawk, and great blue heron nests within this roadless area. Sandhill cranes have been observed in the muskegs but it is not known if they nest here. Harlequin ducks have been observed on Sumner Strait. Towers Lake is a key waterfowl area. The American peregrine falcon may migrate through this area, and is most likely to be present around shorebird population centers.

There is a key wildlife and waterfowl migration route on the isthmus between Duncan Salt Chuck and Portage Bay to the northeast of this roadless area. There is a key wildlife east-west movement corridor from Duncan Canal to Rocky Pass (Keku Strait) along the Castle River and Keku Creek drainages. Irish Lakes, Towers Lake, and Kushneahin Creek and Lake are key waterfowl areas for Kupreanof Island.

Sea otters are migrating into the Inside Passage area and have been sited in Sumner Strait south of the roadless 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). Humpback whales are known to use Duncan Canal and

Steller sea lions use the waters around the island but there are no known haulout areas along the roadless area's shores. 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 and trumpeter swans have been documented within the roadless area. Ospreys have nested at Douglas Bay and the Duncan Canal Tidal Flats and have been seen at Towers Arm and Irish Lakes. In addition, 12 sensitive plant species are known or suspected to occur in the Petersburg Ranger District. One sensitive plant, *Poa laxiflora,* has been found along the southern shore of the area near Totem Bay.

**(d) Karst, Cave, and Other Geologic Resources:** There is a small area of low vulnerability karst north of Taylor Creek along the shore of Towers Arm. There are 54 acres of karst resources, or less than 1 percent, mapped in this roadless area. Stone columns comprised of columnar basalt formed the "totems" at the head of Totem Bay.

**(5) Scientific and Educational Values:** No unique scientific or educational values have been identified.

**(6) Scenic Values:** Portions of the roadless area are viewed from Sumner Strait, a major travel route used by tour boats. The Tunehean Creek drainage is seen as background from Rocky Pass, a secondary travel route used frequently by recreationists in small boats. Most of the roadless area appears unmodified from established travel routes; although the beach area appears modified where timber harvest has occurred in the past and it will be less obvious as the trees grow. Areas with recent harvest and road building in the center of the roadless area appear highly modified.

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; Keku Strait, a tour ship and small boat route; Rocky Pass, Duncan Canal, and Towers Arm, which are small boat routes; Totem and Douglas Bay, Duncan Canal, and the Point Barrie to Totem Bay area, which are saltwater use areas; and the public recreation cabins at Towers Arm, Towers Lake (no longer in service), and Indian Point.

Approximately 15 percent of this roadless area is inventoried in Variety Class B (possessing landscape diversity that is common for the character type). The remaining 85 percent is inventoried in Variety Class C (possessing a low degree of landscape diversity).

The majority of this area (89 percent) is natural appearing and is in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. About 4 percent of the area is in EVC III, where the average person notices changes in the landscape, but they do not attract attention. Two percent of the area has an EVC of Type IV, where changes in the landscape are easily noticed by the average person and may attract some attention. They appear to be disturbances but resemble natural patterns. Four percent is 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:** The area lies within the traditional territory of the Kake and Stikine Tlingit. Extensive cultural resource survey has occurred along the southern and southwestern coast of the area. Identified archaeological sites include historic period cabins, fur farms, and a saltery. Culturally modified trees dot the shoreline and historic period mining has occurred in the area interior. Prehistoric period sites include fish traps, villages, and camps. No known significant cultural sites are located in the area interior. A rather extensive road system, designed for timber management, extends into the center of the area from Kake to the headwaters of Keku Creek and Castle River. The road system is also used for deer, moose, and black bear hunting. Recreation in the area is moderate. Sport fishing, hunting, and mineral collecting occurs along the beach. VCUs 429, 432, 433, 436 were listed among the VCUs with highest community fish and wildlife values. No VCUs were listed in the second or third most important group for community use value. VCUs 427.1, 431, 432, and 433 were listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** South Kupreanof Roadless Area is surrounded by roadless areas on three sides, forming the center of a relatively large roadless area that entails portions of several closely located islands. The area is east of Rocky Pass Roadless Area (243) and west of Castle Roadless Area (215) on Kupreanof Island. The drainages located in the southwest portion of the roadless area could be managed with the Rocky Pass Roadless Area. The North Kupreanof Roadless Area (211) and a developed area southeast of Kake lie to the north. On the northeast corner, it adjoins the Petersburg Creek-Duncan Salt Chuck Wilderness. The boundary in the south is the shoreline along Sumner Strait and Keku Strait. A road has been extended towards the middle of the roadless area from the north. Some units have been harvested along the road and further road building and harvest is planned. This has influenced the integrity and the manageability of the roadless area to some extent.

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

**(1) Recreation, Including Tourism Potential:** Overall recreation potential for South Kupreanof is low. A variety of recreation opportunities, which are of interest to the average visitor, are limited in the area. A road system now links Kake to the interior of the roadless area and additional road construction is under contract with the Four Leaf Timber Sale. This will improve access for some types of recreation, and the surrounding area may have more recreation potential than in the past, particularly attractions like Irish Lakes and Kluane Lake. Kushneahin Lake also has higher recreation potential since it is large enough for a floatplane to land on.

In 1996, the Alaska Visitors Association (AVA) proposed three recreation developments in the South Kupreanof area. In Totem Bay and in the area between Towers Arm and Hamilton Bay, AVA proposed hut-to-hut canoeing with capacity for 25 persons per day. A day wildlife observatory with capacity for 25 persons per day was proposed along Castle River. A commenter on the Douglas Timber Sale project proposed a black bear viewing facility at the mouth of Lovelace Creek. None of these projects is scheduled for implementation at this time nor planned for the foreseeable future.

**(2) Subsistence Uses:** Existing subsistence use is not likely to be affected by continued management as a roadless area or as wilderness.

**(3) Fish Resources:** Three major fish enhancement projects, including two fish ladders, have been constructed on the Irish and Keku Creek system. A steppass fish ladder was constructed on Upper Keku Creek in 1985. There was an enhancement project on Tunehean Creek outside the roadless area to provide future large woody debris to improve fish habitat in areas where timber has been harvested by thinning the small streamside trees to induce the trees to grow faster. There is a potential fish enhancement project to alter a partial barrier to fish passage on Kushneahin Creek.

**(4) Wildlife Resources:** No wildlife habitat improvement projects are planned currently in this area. Some of the second-growth stands may be thinned to improve wildlife use of the shoreline area.

**(5) Timber Resources:** There are approximately 81,989 acres mapped as productive old growth in the roadless area and there are 2,108 acres of second growth resulting from timber harvest. Of these acres, 45,864 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), 19,365 acres, or 9 percent of this roadless area are estimated to be suitable for timber production. Approximately 6,807 of the suitable acres are mapped as high-volume old growth; of these acres, 1,108 are mapped as high-volume, coarse-canopy old growth.

Timber harvest and road construction under the Four Leaf and Shamrock Timber Sales will continue to occur in the roadless area. Evaluation is currently underway for the Douglas Timber Sale in the Southern portion of the area. Other projects are planned in the 10-year sale schedule.

**(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 U.S. Bureau of Land Management lists the Tunehean Creek area as having potential for mineral extraction for copper and molybdenum. The U.S. Geological Survey (USGS) also identified the potential copper resources in the Duncan Salt Chuck area. Valid mining claims exist west of Duncan Salt Chuck Creek.

The roadless area contains 2,361 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals and 916 acres of land with low potential (Coldwell, 1990; USDA Forest Service, 1991). In addition, the roadless area contains an estimated 157,136 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:** Any further road development is expected to be for timber management. Extending Road 6314 south would connect Kake with the southern shore of Kupreanof Island. The Forest Plan identifies a potential powerline corridor paralleling Big John Creek towards upper Duncan Canal and then following Duncan Canal for approximately 8 miles before crossing the Canal and heading towards Mitkof Island. This corridor represents an alternate route for an intertie between Kake and the Tyee powerline. Wilderness designation could preclude the use of this route.

**(9) Water Availability and Use:** The one public recreation cabin still in service relies on the use of surface 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 54 acres or less than one percent of the roadless area. The area contains no Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** A special use permit has been issued for a tent platform at Irish Lakes.

**(12) Land Status:** There is no other land ownership within the roadless area other than National Forest System lands.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** The areas immediately adjacent to saltwater and majors streams receive light recreational use. There is high interest in maintaining Duncan Canal in its natural state for recreational use. Most other lowlands are lacking interest to the average user.

**(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 bill recommended a portion of this area (VCUs 440, 438, and 436) be designated as the West Duncan Wilderness. In 2001, HR 2908 proposed that the entire roadless area be designated as part of the West Duncan Canal/Castle River Wilderness.

**(c) Public Input During Forest Plan Revision and Appeals:** The Duncan Canal area received many comments with most requesting protection in the form of LUD II-type designations. Recreation, scenic, wildlife, and roadless values were the main reasons given. The Towers Arm and Castle River areas were among the main areas of concern. A number of streams, including the Castle River, Kushneahin Creek, and Lovelace Creek, were recommended for Wild and Scenic status. In 1996, the Alaska Visitor Association proposed that hut-to-hut canoeing be developed between Towers Arm and Hamilton Bay and along Totem Bay. They also proposed a day use wildlife observatory with a capacity of 25 people at Castle River, outside the roadless area. Timber industry comments supported continued road building and timber harvest.

In Forest Plan appeals, the Southeast Alaska Conservation Council (SEACC) identified the southwest portion of the area along Rocky Pass (Keku Strait) and part of the area along Sumner Strait as a “SEACC Special Area,” recommending that it be protected from development.

**(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, while others wanted to keep the current level of development.

**(e) Public Input Expressed for Project-level EISs and Other Input:** During the Shamrock Timber Harvest EIS and scoping for the Douglas Timber Harvest project, the following comments were received. The Narrows Conservation Coalition believes this locality to be unsuitable for timber harvest. The Forest Service should manage from existing roads rather than building more roads. There was concern with increased hunting pressure resulting from road construction. The City of Kupreanof is opposed to extensive timber harvest and the creation of an extensive road system in the area. Some residents of Kake would like access to the south end of Kupreanof Island by road and believe that this would bring economic opportunities to their community.

**(f) Public Input Expressed During Supplemental EIS Process:** The city of Kupreanof recommends the entire Castle River drainage for designation as wilderness.

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. However, they encouraged the Forest Service not to log or build logging roads in watersheds that are primary salmon producing watersheds or otherwise community use areas important to Petersburg residents including the Castle River.

The Organized Village of Kake passed a resolution requesting that "customary and traditional areas such as … Totem and Douglas Bays (VCUs 132,433), Kushneahin Lake/stream (VCU 431)… be recommended for long-term protection".

SEACC recommended that the South Kupreanof Roadless Area be designated as wilderness to protect valuable fish and wildlife habitat. They indicated that the Douglas and Totem Bay areas, along the southern boundary, contain extremely valuable fish habitat and are heavily utilized by residents of Kake, Port Protection, and Point Baker. Residents of these communities gave testimony asking for the protection of the high quality hunting opportunities on South Kupreanof. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 214 for long-term protection.

Individuals noted the high subsistence value of the southern portion of this area to the residents of Point Baker. Others noted that the timber is so sparse on South Kupreanof, that it should be left alone and that the area has very high fish and wildlife values. Some individuals recommended South Kupreanof for protection.

**(2) Nearby Roadless and Wilderness Areas and Uses:** South Kupreanof is one of four contiguous roadless areas on the western portion of Kupreanof Island. The other roadless areas are Rocky Pass (243), Castle (215), and North Kupreanof (211). The Petersburg Creek-Duncan Salt Chuck Wilderness is also adjacent to this roadless area in the northeast. Overall, this area receives light recreational use. Timber management and road building has recently occurred in the middle of the roadless area and is currently on-going with the Four Leaf Timber Sale. Additional sales are being planned in the south part of the roadless area (Douglas Timber Sale EIS).

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 105 | 135 |
| Petersburg (Pop. 3,224) | 10 | 40 |
| Wrangell (Pop. 2,308) | 35 | 35 |
| Ketchikan (Pop. 14,070) | 95 | 100 |

Wrangell, Kake, and Petersburg are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** South Kupreanof Roadless Area occupies most of the southern half of Kupreanof Island. Landforms in this area are characterized by uniformly-rolling to moderately-steep hills, typically less than 1,500 feet in elevation, though some peaks are over 2,000 feet. The ridges parallel each other in a roughly northwest to southeast direction. The area contains approximately 107 miles of shoreline on saltwater. Petersburg is about 10 air miles to the east and the community of Kake is 15 air miles to the northwest. It is accessible primarily from saltwater by boat or floatplane and by road from Kake.

This relatively large roadless area is mostly unmodified and natural appearing. However, the extension of the road system from the north, influence the area to some degree. The natural integrity and apparent naturalness are rated very high. The opportunity for solitude and primitive recreation is very high in the area.

None of the area is rated as distinctive for the character type from a scenery perspective. There is a small area of karst north of Taylor Creek along the shore of Towers Arm. Stone columns comprised of columnar basalt form the "totems" at the head of Totem Bay.

The roadless area includes about 22,405 acres of high-volume, old-growth forest. Of these acres, 4,546 are mapped as high-volume, coarse-canopy old growth.

The South Kupreanof Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 25 percent of the province. It is one of 12 inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The South Kupreanof Roadless Area lies completely within the Kupreanof Lowlands Ecological Section and represents 19 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 majority (75 percent) of the roadless area is in the Sumner Strait Volcanics Ecological Subsection. This portion of the roadless area represents 45 percent of the entire ecological subsection, minor portions of which are protected by existing wilderness and LUD II (0.1 percent and 1 percent, respectively) and by other existing non-development LUDs (32 percent). Most of the balance (23 percent) of the roadless area is in the Duncan Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents 20 percent of the entire ecological subsection, 6 percent of which is in existing wilderness, and is well represented by other existing non-development LUDs (35 percent). The remaining 2 percent of the roadless area is within the Kake Volcanics Ecological Subsection; this portion of the roadless area represents 3 percent of the entire ecological subsection. Approximately 23 percent of this ecological subsection is protected by other existing non-development LUDs.

The South Kupreanof 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 four other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for wilderness designation of the South Kupreanof Roadless Area. Designation would create a wilderness that would make a large addition to the Petersburg Creek-Duncan Salt Chuck Wilderness. The roadless area connects several inventoried roadless areas that could be considered for an even larger wilderness. Designation of the area also would add Congressional protection to about 45 percent of the Sumner Strait Volcanics Ecological Subsection and 3 percent of the Kake Volcanics Ecological Subsection that each have about 1 percent or less in wilderness or LUD II. The Four Leaf and Shamrock Timber Sales are under contract and will continue to influence the north central portion of the roadless area. Additional timber sale-related planning for the southern portion is ongoing. The roadless area also includes an alternate route for power transmission that would connect Kake to the future Southeast Alaska power grid. 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 South Kupreanof Roadless Area would be managed under the existing Forest Plan if Alternative 1 or 2 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. The land in the development LUDs provides an estimated 19,365 acres that are suitable for timber production (13 percent of the suitable acres on the Petersburg Ranger District). Approximately 1,108 of the suitable acres are classified as high-volume, coarse-canopy old growth. The Four Leaf Timber Sale that is under contract will continue. The roadless area contains approximatley 2,361 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals and 916 acres of land with low potential. In addition, the roadless area contains an estimated 157,136 acres of undiscovered locatable mineral resources; the acres are considered to have low potential for development. The timber sales, recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area would be affected by ongoing developments.

Under Alternative 3, a 76,081-acre portion of the area in Old-growth Habitat, Semi-remote Recreation, Scenic Viewshed, Modified Landscape, and Timber Production LUDs would be converted to Recommended Wilderness. No timber harvest would be allowed and the recreation, minerals, and special use programs could be restricted within the Recommended Wilderness area. Lands suitable for timber production in the roadless area would be reduced to approximately 10,905 acres. Designation of the area as wilderness would expand the Petersburg Creek-Duncan Canal Wilderness area to the west and south. The values associated with the natural settings within the Recommended Wilderness area would receive long-term protection if designated.

Under Alternative 4, a 410-acre portion of the Semi-remote Recreation LUD 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. No timber harvest would be allowed and the recreation, minerals, and special use programs could be restricted within the Recommended Wilderness area. The values associated with the natural settings within the Recommended Wilderness area would receive long-term protection if designated.

Under Alternative 5, a 107,719-acre portion of the area in Remote Recreation, Old-growth Habitat, Semi-remote Recreation, Scenic Viewshed, Modified Landscape, and Timber Production LUDs would be converted to Recommended Wilderness. Designation as wilderness would extend the Petersburg Creek-Duncan Creek Wilderness to the west and south, and add wilderness in the high value southwest portion of the roadless area associated with Rocky Pass. No timber harvest would be allowed and the recreation, minerals, and special use programs could be restricted in the Recommended Wilderness area. Lands suitable for timber production would be reduced to approximatley 7,807 acres. The values associated with the natural settings within the Recommended Wilderness areas would receive long-term protection if designated.

Under Alternative 6, a 3,039-acre portion of the area would be converted to Recommended LUD II. The remaining portion of the roadless area, approximately 210,079 acres, would be converted to Recommended Wilderness. No timber harvest would be allowed in the roadless area. The ongoing recreation, transportation and utility planning, minerals, and special use programs would continue similar to current conditions in the Recommended LUD II. Restrictions could be expected on programs in the Recommended Wilderness portion. Mineral prospecting would be allowed in the Recommended Wilderness portion up to the time that the area is actually designated as wilderness by Congress. Designation of the area also would add Congressional protection to about 45 percent of the Sumner Strait Volcanics Ecological Subsection and 3 percent of the Kake Volcanics Ecological Subsection that each have about 1 percent or less in wilderness or LUD II. The values associated with the natural settings would receive long-term protection if designated LUD II or wilderness. Designation as wilderness would extend the Petersburg Creek-Duncan Creek Wilderness to the west and south across to Rocky Pass.

Under Alternative 7 or 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area also would add Congressional protection to about 45 percent of the Sumner Strait Volcanics Ecological Subsection and 3 percent of the Kake Volcanics Ecological Subsection that each have about 1 percent or

less in wilderness or LUD II. The values associated with the natural settings in the roadless areas would receive long-term protection if designated wilderness. Designation as wilderness would extend the Petersburg Creek-Duncan Creek Wilderness to the west and south across to Rocky Pass.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 214 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | 76,081 | 410 | 107,719 | 210,083 | 213,122 | 213,122 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | 250 | 250 | 250 | 250 | 179 | | | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | 30,572 | 30,572 | 23,620 | 30,489 | 16,751 | | | |
| Semi-remote Recreation | 13,003 | 13,003 | 2,081 | 12,676 | 1,948 | | | |
| Recommended LUD II | | | | | | 3,039 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 943 | 943 | 5 | 943 | 937 | | | |
| Modified Landscape | 3,916 | 3,916 | 75 | 3,916 | 1,470 | | | |
| Timber Production | 164,438 | 164,438 | 111,011 | 164,438 | 84,117 | | | |
| **TOTAL** | **213,122** | **213,122** | **213,122** | **213,122** | **213,122** | **213,122** | **213,122** | **213,122** |
| Suitable Timber Lands | 19,365 | 19,365 | 10,905 | 19,365 | 7,807 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Castle (215)

**ACRES (NFS):** 52,432

**BIOGEOGRAPHIC PROVINCE:** Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Kupreanof Lowlands

**2003 WILDERNESS ATTRIBUTE RATING:** 25

### I. Overview and Description

**(1) Location and Access:** The Castle Roadless Area lies along the southwest shore of Duncan Canal in the southeast corner of the main lobe of Kupreanof Island. It is mostly northwest of Kah Sheets Bay and includes Castle River estuary and flats, and the lower 1/3 of the watershed. Most of the shoreline along Kah Sheets Bay and areas along Little Duncan Bay are outside the roadless area boundary due to the presence of roads constructed for timber management in the mid 1970s. The roadless area also includes the Castle Islands in Duncan Canal, Kah Sheets and Lung Islands in Kah Sheets Bay, the Level Islands south of Kah Sheets Bay, and other small islands.

The community of Kake lies 30 air miles to the northwest, and the community of Petersburg lies 10 air miles to the northeast. Petersburg and Kake are served by the Alaska Marine Highway and Petersburg has daily jet service. The roadless area is accessed primarily from saltwater by boat or floatplane. Only a few good anchorages can be found along Duncan Canal. Kah Sheets Lake is large enough to land small floatplanes. There are no sites suitable for landing wheeled aircraft. Access to areas away from the water is by foot or helicopter.

**(2) History:** The area lies within the traditional territory of the Stikine Tlingit. Known cultural resources in the area include historic period cabins and a barite mine that operated in the area until the 1970s. Though limited archaeological survey has been completed in the area, culturally modified trees and prehistoric period site types that likely occur along the area shoreline include fish traps, villages, and camps. Timber harvest via Forest Service roads and beach logging occurs in the area. The area has relatively intensive recreation use compared to the surrounding roadless areas.

**(3) Geography and Topography:** This roadless area is similar in landform character to the adjacent South Kupreanof (214) Roadless Area. The distinctive feature is that it encompasses two major estuaries, Castle River Bay and Kah Sheets Bay. Relatively large tidal flats are formed in these bays at low tides. Kah Sheets Lake is the largest lake on Kupreanof Island. Islands and islets make up about 1,511 acres of this area, while alpine covers another 88 acres. Freshwater lakes total 429 acres and there are 75 miles of saltwater shoreline. There are no of ice or rock features mapped in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province. This province is generally characterized by subdued, rolling topography and extensive muskeg areas, but may have rugged terrain in localized areas.

Ecological Section/Subsection. The Castle Roadless Area is contained entirely within the Kupreanof Lowlands Ecological Section (M246G). These areas are represented by two ecological subsections (see table below). The Duncan Canal Till Lowlands Ecological Subsection is the dominant subsection within the Castle Roadless Area. The low relief, high precipitation, and depositional soils have produced an abundance of wetlands on poorly drained sites. Productive forests are limited to slopes and riparian areas with mineral soil. The Sumner Strait Volcanics Ecological Subsection represents about a third of the South Kupreanof Roadless Area. Water-resistant volcanic flows of relatively recent origin arise from lowland

glacial deposits. The interplay of volcanic and glacial forces have left a landscape of shallow organic soils on long, gentle slopes and mineral soils on short, steep slopes. Productive hemlock, Alaska yellow cedar, and spruce forests are found on the steep slopes (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kupreanof Lowlands | Duncan Canal Till Lowlands | 64% |
| | Sumner Strait Volcanics | 36% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from forested wetlands to open muskeg.

**(c) Vegetation:** Muskeg/forested wetland timber complexes on wet areas are interspersed with mature mixed conifer plant communities on better-drained sites. Approximately 7,551 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Timbered hill slopes are dominated by western hemlock, Sitka spruce, and Alaska-cedar plant communities. Minor amounts of redcedar are present. There are 88 acres of alpine vegetation mapped in the area.

There are approximately 43,893 acres mapped as forest land of which 20,165 acres or 46 percent are mapped as productive old-growth forest. Of the productive old growth, 6,312 acres or 31 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,900 acres of high-volume, coarse-canopy old growth. There are about 1,035 acres of second-growth forest where beach harvest has occurred in the past.

**(d) Fish Resources:** Fifteen Alaska Department of Fish and Game (ADF&G) numbered salmon producing streams are present. Kah Sheets and Castle River are the most well known. This area supports significant runs of steelhead and cutthroat trout, Dolly Varden char, and pink, chum, coho, and sockeye salmon.

**(e) Wildlife Resources:** Sitka black-tailed deer and moose are present, and black bears are abundant. Historically, South Kupreanof Island has been known for moderate to high Sitka black-tailed deer populations. In the late 1960s and early 1970s, the central portion of Southeast Alaska experienced a decline in deer populations. Populations on the island are increasing. Wolves are located across all habitat types. Mink, river otters, beaver, marten, ermine, red squirrel, mice, shrews, and voles are well distributed. Fishers and wolverines are incidental species. A mountain lion was once trapped near Totem Bay to the west; however, this species is considered a rare migrant on Mitkof and Kupreanof Islands and the Alaska portion of the mainland. The northern flying squirrel has been migrating to Kupreanof Island but is not yet well distributed on the island; some may occur within this roadless area.

Bald eagles, northern goshawks, red-tailed hawks, sharp-shinned hawks, species of owls, spruce grouse, and ptarmigan all occur within the roadless area. Bats are present during the summer months and may over-winter. The American peregrine falcon may migrate through the district, and can be found around large shorebird population areas. The bays are important waterfowl habitat areas.

Numerous species of ducks and geese, trumpeter swans, marbled murrelets, sandhill cranes, and great blue herons have been seen within this roadless area, both during migration and, in some cases, during the nesting season. Harlequin ducks have been observed on Sumner Strait.

Many species of birds are present. Red-throated, Pacific, and common loons all occur on Kupreanof Island. Several plover, yellowlegs, and sandpiper species occur, mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Amphibians known to occur on Kupreanof Island include the rough-skinned newt and western toad. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts.

Sea mammals known to inhabit the waters surrounding Kupreanof Island are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal. Sea otters are migrating into the Inside Passage area and have been sighted in Sumner Strait south of the roadless area.

**(5) Management Direction and Current Uses:** The 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, Semi-remote Recreation, Old-growth Habitat, and Wild River.

| LUD | Acres |
|---|---|
| Timber Production | 9,440 |
| Modified Landscape | 8,355 |
| Scenic Viewshed | 4,813 |
| Semi-remote Recreation | 14,797 |
| Old-growth Habitat | 11,566 |
| Wild River | 3,460 |

Approximately 43 percent of the roadless area was allocated to a development LUD (Timber Production, Modified Landscape, Scenic Viewshed). Approximately 18 percent of the roadless area was allocated to the Timber Production LUD. The Timber Production LUD is located in three areas, west of Whiskey Pass, west of Kah Sheets River, and next to Sumner Strait near Level Islands. The Modified Landscape LUD was assigned to approximately 16 percent of the roadless area. This LUD is located in the west central portion interspersed with the Scenic Viewshed LUD. Small areas around Duncan Canal were allocated to the Scenic Viewshed LUD, which accounts for approximately 9 percent of the roadless area.

Most of this roadless area, approximately 57 percent, was allocated to a non-development LUD (Semi-remote Recreation, Old-growth Habitat, Wild River). Much of the area along the Castle River, Duncan Canal shoreline, and Kah Sheets Bay was allocated to the Semi-remote Recreation LUD, which accounts for approximately 28 percent of the roadless area. The small islands associated with the roadless area are part of this LUD, too. Approximately 22 percent of the roadless area was allocated to the Old-growth Habitat LUD. Lands allocated to the Old-growth Habitat LUD are primarily located in three areas, on both sides of Little Duncan Bay and just north of Castle River. These two non-development LUDs combine to form a medium old-growth habitat reserve. Approximately 7 percent of the roadless area was allocated to the Wild River LUD located on Kah Sheets Creek and Lake.

This area has high recreation use. Recreation uses include bear, deer, moose, and waterfowl hunting; pink salmon, coho salmon, steelhead, and trout fishing; wildlife viewing; boating; recreation cabin use; camping; and hiking. There are two public recreation cabins near the mouth of Castle River, one cabin at Kah Sheets Lake, one on Kah Sheets Bay, and one cabin at Breiland Slough. Planked trails connect the Castle River cabins and provide good fishing opportunities along Castle River. A planked trail connects the Kah Sheets Bay cabin, just outside of the

roadless area, with the cabin on Kah Sheets Lake. The cabin at Kah Sheets Lake provides barrier-free access from a float plane dock. No outfitter/guide use was documented in 2000.

Other than beach logging and similar logging on the islands, no harvest or road building activity has taken place (except just outside the roadless area along the shoreline in two areas).

There are no active timber sales in this area or any timber harvest activities currently being analyzed. Timber harvest projects are planned in later years and are on the 10-year timber resource schedule.

**(6) Appearance (Apparent Naturalness):** This area appears largely unmodified and natural along Duncan Canal. Roads were constructed along portions of the shoreline along Little Duncan Bay and Kah Sheets Bay for timber harvest in the mid-1970s and the harvest is visible, but not dominant. Although these areas have been dropped from the roadless area, they are immediately adjacent to it. Several areas of beach logging are also present along the shoreline and especially on the small islands (Level Islands, Castle Islands, other small islands). There are facilities used by the FAA and the Coast Guard including a road on Level Island. The old barite mine site is apparent on the Castle Islands.

**(7) Surroundings (External Influences):** The area contains 12 inventoried recreation places that cover 13,372 acres, or 26 percent of the roadless area. Castle Roadless Area is surrounded by other roadless areas and saltwater. Beach logging and roading along the shoreline, which is just outside of the roadless area, has affected the character of this area. However, most of these areas have naturally revegetated and do not dominate the setting. Views of timber harvest and houses on private land across Duncan Canal are visible from parts of this roadless area.

**(8) Attractions and Features of Special Interest:** The areas immediately adjacent to saltwater or major creeks are highly valued for recreation uses such as black bear and waterfowl hunting, camping, beach combing, and sport fishing. The recreation cabins are popular and often in use from late April through October. Kah Sheets Lake Cabin offers a fly-in opportunity that is accessible to most users.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The Level Islands, Castle Islands, Kah Sheets Island, and Lung Island, as well as a few small areas along the coast with older beach logging units but no roads have been added.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is essentially unmodified, except for the logging activity outside the roadless area along the beach. Most of these areas have revegetated and do not dominate the setting. The overwhelming appearance of natural and unmodified land makes the area suitable for wilderness classification. The natural integrity of the area is also largely uncompromised.

**(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 Castle Roadless Area. However, floatplanes and motorboats may disrupt visitors for brief periods. Present recreation use levels are moderate to high in specific locations. Visitors would expect to see or be seen by others in passing boats if camped directly on the beach.

Travel on land is moderately difficult, offering a moderately high degree of physical challenge. 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 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) | 21,333 | 41% |
| Semi-Primitive Non-Motorized (SPNM) | 17,847 | 34% |
| Semi-Primitive Motorized (SPM) | 10,759 | 21% |
| Roaded Modified (RM) | 2,491 | 5% |

The area contains 12 inventoried recreation places that cover 13,372 acres, or 26 percent of the roadless area.

| ROS Class | # of Rec. Areas* | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPNM | 3 | 5,201 |
| SPM | 5 | 7,594 |
| RM | 6 | 936 |

* Some Rec. Places 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, or adjacent to, the roadless area. They are located at Castle River, Castle Flats, Kah Sheets Lake, Kah Sheets Bay, and Breiland Slough. The developed trails in the Castle Roadless Area include Castle River Hiking Trail #459 and Kah Sheets Hiking Trail #503.

**(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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Castle Roadless Area was given a rating of 25 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 also given a rating of 25.

**(4) Ecologic and Geologic Values:** This area is part of a larger network of roadless areas that includes most of Kuiu and Kupreanof Islands, including the Kuiu Wilderness, Tebenkof Wilderness, and the Petersburg Creek-Duncan Salt Chuck Wilderness.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 434 and 435, most of the roadless area, as primary producers of salmon and sportfish.

Kah Sheets and Castle River are the most well known stream systems in this area. Castle River and Kah Sheets are noted for good spring steelhead fishing, cutthroat trout fishing throughout the summer and fall, and coho fishing in the late summer.

Castle River has high commercial and sport fish values for coho salmon, steelhead, and cutthroat trout. This area has very good coho salmon smolt production capability. ADF&G lists Castle River as one of the top 19 "high quality watersheds" in Southeast Alaska. The large amount of spawning and rearing habitat in the river contribute to its importance to commercial and sport fishing.

Kah Sheets Creek and Lake have high fish values for coho and sockeye salmon, steelhead, and cutthroat trout. Kah Sheets produces good steelhead fishing in the spring, and sockeye salmon fishing in July. A partial barrier falls 1.5 miles upstream concentrates the sockeye salmon allowing a unique sport fishing opportunity. This area also has very good coho salmon smolt production capability. ADF&G has identified the creek as one of the 65 "important" watersheds for salmon in Southeast Alaska. Fish and recreational opportunities are present throughout the drainage, but are most concentrated from the head of the lake

down to saltwater. The sockeye salmon run in Kah Sheets provides one of the few nearby sport fishing areas for this species for Petersburg residents.

**(b) Wildlife Resources:** Sitka black-tailed deer and moose are present, and black bears are abundant. Historically, South Kupreanof Island has been known for moderate to high Sitka black-tailed deer populations. In the late 1960s and early 1970s, the central portion of Southeast Alaska experienced a decline in deer populations. Populations on the island are increasing. Recent surveys indicate a growing moose population here. Wolves are located across all habitat types. Trapping occurs along the shorelines. A mountain lion was once trapped near Totem Bay west of this roadless area; however, this species is considered a rare migrant on Mitkof and Kupreanof Islands and the Alaska portion of the mainland. Sea otters are migrating into the Inside Passage area and have been sighted in Sumner Strait south of the roadless area.

Red-tailed hawks and sharp-shinned hawks are known to nest in this roadless area, and sandhill cranes are present. Harlequin ducks have been observed on Sumner Strait. Waterfowl and black bear hunting are popular activities in this area. Castle River has high waterfowl hunting values. The mouth of Kah Sheets Creek is an excellent area for waterfowl and black bear hunting.

**(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). Humpback whales are known to use Duncan Canal and Steller sea lions use the waters around the island but there are no known haulout areas along the roadless area's shores. 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 and trumpeter swans have been documented within the roadless area. Ospreys have been seen at Kah Sheets Creek. In addition, twelve sensitive plant species are known or suspected to occur in the Petersburg Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There is a small area of low vulnerability karst at the head of Little Duncan Bay. The karst resources are mapped as 50 acres, or less than 1 percent, of the roadless area. The Castle Islands east of the mouth of Castle River are also karst formations.

**(5) Scientific and Educational Values:** No unique scientific or educational values in this roadless area have been identified.

**(6) Scenic Values:** This area appears largely unmodified and natural along Duncan Canal. Portions of the area along Little Duncan Bay and Kah Sheets Bay were harvested along the beach in the mid-1970s and the harvest is visible, although not dominant. The interior is mostly low lying and is not visible, except for the basin around Kah Sheets Lake. Views of timber harvest in the headwaters of Castle River outside of the roadless area, and across Duncan Canal are visible from parts of this roadless area.

Visual Priority Routes and Use Areas identified by the Forest Plan, that area within or adjacent to the area include: Beecher Pass Area, a State Marine Park; Kah Sheets Creek and Lake, which are recommended for Wild, Scenic and Recreational River designation; Beecher Pass, Whiskey Pass, and Duncan Canal, which are small boat routes; Kah Sheets and Little Duncan Bay, saltwater use areas; Kah Sheets Lake, dispersed recreation area; the Forest Service cabins in Castle Flats, Castle River, Breiland Slough, Kah Sheets Bay and Lake; and Kah Sheets Hiking Trail #503 and Castle River Hiking Trail # 459.

About 41 percent of this roadless area is inventoried as Variety Class B (possessing landscape diversity that is common for the character type). The remaining 58 percent is inventoried as Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, 93 percent, is natural appearing, where only ecological change has occurred and has an Existing Visual Condition (EVC) of Type I. One percent of the area has an EVC III, in which the average person notices changes in the landscape, but they do not attract attention. 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. About 3 percent of the area has an EVC V, in which changes to the landscape are obvious to the average visitor and dominate the landscape.

**(7) Social, Cultural, and Historical Values:** The area lies within the traditional territory of the Stikine Tlingit. Known cultural resources in the area include historic period cabins and a barite mine that operated in the area until the 1970s. Though limited archaeological survey has been completed in the area, culturally modified trees and prehistoric period site types that likely occur along the area shoreline include fish traps, villages, and camps. In the 1970s, timber harvest and road construction occurred along portions of the coast and adjacent interior terrain. Several islands included in the area have also been harvested for timber. The area has relatively intensive recreation use for this province. There are recreation cabins and hiking trails that access popular sport and subsistence fishing and hunting spots. VCUs 424 and 435, almost the entire roadless area, are listed among the VCUs with highest sensitivity to disturbance of subsistence use areas. The same VCUs are listed with the VCUs with the highest community use value (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** Castle Roadless Area is surrounded by roadless areas or saltwater on all sides, except for the fringe of developed area along the shore of Kah Sheets Bay and south of Little Duncan Bay. The boundary between this roadless area and the South Kupreanof Roadless Area to the west is not well defined. Management of this area as roadless is influenced by the roads and timber harvest along the shore.

This area is part of a larger network of roadless areas that includes most of southern and eastern Kuiu Island and Kupreanof Island, including the Kuiu Wilderness, Tebenkof Wilderness, and the Petersburg Creek-Duncan Salt Chuck Wilderness. The roadless area could be manageable as a wilderness, especially if combined with the northeastern portion of the adjacent South Kupreanof Roadless Area, which would connect it with the Petersburg Creek/Duncan Salt Chuck Wilderness. Although timber management and road building have occurred along the shore, the harvest units have revegetated. The roads remain and the integrity of the area as a wilderness would improve if these roads were decommissioned and these two areas were added to the roadless area.

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

**(1) Recreation, Including Tourism Potential:** Recreation potential for the Castle Roadless Area is high due to its proximity to relatively sheltered waters and to Petersburg. Currently there are five recreation cabins and two trails, all of which are heavily used. There is potential for additional recreation cabins, trails, and outfitter and guide permits.

In 1996, the Alaska Visitors Association (AVA) proposed a day use wildlife observatory with capacity for 25 persons per day along the Castle River.

**(2) Subsistence Uses:** Existing subsistence uses of the area would not be affected by wilderness designation.

**(3) Fish Resources:** Kah Sheets Creek has been identified as having potential for fish enhancement, through construction of two fish ladders.

**(4) Wildlife Resources:** There are no wildlife habitat improvement projects currently planned in the roadless area. Some of the second-growth stands may be thinned to improve wildlife use of the shoreline area.

**(5) Timber Resources:** There are approximately 20,165 acres mapped as productive old-growth forest in the roadless area. There are also 1,035 acres mapped as second-growth forest resulting from beach harvest in the past. Of these acres, 12,423 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), 3,098 acres, or 6 percent of

this roadless area are estimated to be suitable for timber production. Approximately 1,209 of the suitable acres are mapped as high-volume old growth; of these acres, 318 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:** Valid mining claims are present near Castle River. A barite mine operated from the 1960s into the 1970s. Information from the U.S. Bureau of Mines indicates the Duncan Canal/Zarembo Island mineral tract has a moderate to high mineral development potential for barite, zinc, lead, and silver.

The roadless area contains 2,952 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, the roadless area contains an estimated 44,446 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 1,467 of these acres are considered to have moderate potential for development.

**(8) Transportation and Utilities:** One possible route for a potential powerline connecting the existing powerline on Mitkof Island with the community of Kake would pass just north of the roadless area near Indian Point.

**(9) Water Availability and Use:** The public recreation cabin at Towers Arm creates a small demand for water. Currently, cabin users must take water from surface sources and treat it before using it. There are no existing or planned hydroelectric or domestic water projects.

**(10) Areas of Scientific Interest:** The mapped karst resources encompass approximately 50 acres or less than one percent of the roadless area. The area contains no Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** Environmental analysis is currently underway for the installation of communication facilities at a location approximately three miles west of Kah Sheets Lake.

**(12) Land Status:** All land within the roadless area is part of the National Forest System.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** The areas immediately adjacent to recreation cabins and trails receive moderate to high recreational use. High interest exists by local users in maintaining the area surrounding Duncan Canal in a natural state for recreational use. Remaining lowlands lack interest to the average user.

**(b) Congressional Interest:** Most of this roadless area was designated as a special management unit by the U.S. Department of the Interior and the Senate Energy Committee in 1979. 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 Castle Roadless Area as part of the West Duncan Canal Wilderness. In 2001, HR 2908 proposed that the entire roadless area be designated as part of the proposed West Duncan Canal-Castle River Wilderness.

**(c) Public Input During Forest Plan Revision and Appeals:** The Duncan Canal area received many comments with most requesting protection in the form of LUD II-type designations. Recreation, scenic, wildlife, and roadless values were the main reasons given. The Castle River and Kah Sheets Creek and Lake areas were among the main areas of concern. The Castle River was recommended for Wild and Scenic status. In 1996, the Alaska Visitor Association proposed a day use wildlife observatory with a capacity of 25 people at Castle River. Timber industry comments supported continued road building and timber harvest.

**(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 while others would like to see development to occur.

**(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 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 that this is one of the few places that humans regularly penetrate inland from the shoreline, following the Castle River upstream.

The Alaska Department of Fish and Game rated the Castle roadless area as the highest priority for protection in the Stikine Area. 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 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. However, they encouraged the Forest Service not to log or build logging roads in watersheds that are primary salmon producing watersheds or otherwise community use areas important to Petersburg residents including the Castle River

The city of Kupreanof recommends the entire Castle River drainage for designation as wilderness.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 215 for long-term protection. SEACC placed this roadless area in a high priority for wilderness protection category.

Many individuals identified the Castle River as an area that needed protection. Some individuals recommended the entire area for permanent protection as wilderness, especially because of its high fish and wildlife and recreation values.

**(2) Nearby Roadless and Wilderness Areas and Uses:** Castle is one of four contiguous roadless areas on the western half of Kupreanof Island. The roadless units on the western half of Kupreanof Island are: Rocky Pass, South Kupreanof, Castle, and North Kupreanof. The Petersburg Creek-Duncan Salt Chuck Wilderness also adjoins these roadless units. Part of this wilderness receives heavy recreational use along Petersburg Creek.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 120 | 145 |
| Petersburg (Pop. 3,224) | 10 | 20 |
| Wrangell (Pop. 2,308) | 30 | 30 |
| Ketchikan (Pop. 14,070) | 90 | 100 |

Wrangell and Petersburg are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Castle Roadless Area lies along the southwest shore of Duncan Canal in the southeast corner of the main lobe of Kupreanof Island. It is mostly

northwest of Kah Sheets Bay and includes Castle River estuary and flats. Most of the shoreline along Kah Sheets Bay and areas along Little Duncan Bay are outside the roadless area boundary due to the presence of roads constructed for timber management in the mid 1970s. The roadless area also includes the Castle Islands in Duncan Canal, Kah Sheets and Lung Islands in Kah Sheets Bay, the Level Islands south of Kah Sheets Bay, and other small islands. Landforms along this area are characterized by uniformly-rolling to moderately-steep hills, typically less than 1,500 feet in elevation. The ridges parallel each other in a roughly northwest to southeast direction, with fairly extensive areas of lowlands in between.

The area is mostly unmodified; however, there are fairly extensive logged areas outside the roadless area along the southern shoreline and some areas of beachlogging elsewhere. These older harvested areas are mostly natural appearing as they mature. The natural integrity and apparent naturalness is considered very high for the area. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

None of the area is rated as distinctive for the character type from a scenery perspective. The area has some areas of karst. Cultural and historic values are found in the area. The area also has five public recreation cabins.

The roadless area includes about 6,312 acres of high-volume, old-growth forest. Of these acres, 1,900 are mapped as high-volume, coarse-canopy old growth.

The Castle Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 6 percent of the province. It is one of 12 inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The Castle Roadless Area lies completely within the Kupreanof Lowlands Ecological Section and represents 5 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 majority (64 percent) of the roadless area is in the Duncan Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents 14 percent of the entire ecological subsection, 6 percent of which is in existing wilderness, and is well represented by other existing non-development LUDs (35 percent). The Sumner Strait Volcanics Ecological Subsection comprises the remainder (36 percent) of the roadless area. This portion of the roadless area represents 5 percent of the entire ecological subsection, minor portions of which are protected by existing wilderness and LUD II (0.1 percent and 1 percent, respectively) and by other existing non-development LUDs (32 percent).

The Castle 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 management of the area in an unroaded condition, and there is similar support for designating the area as wilderness. Designation of the area as wilderness would add Congressional protection to approximately 5 percent of the Sumner Strait Volcanics Ecological Subsection that that has very little area represented in wilderness or LUD II. Designation would create a wilderness that by itself would include an area more associated with the shoreline and the lower portions of watersheds such as the Castle River. The Castle Roadless Area may be more valuable for wilderness if considered in conjunction with part or all of the South Kupreanof Roadless Area to the west and north. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System by itself would be moderate and high in conjunction with all or portions of the South Kupreanof Roadless Area.

## V. Environmental Consequences

The Castle Roadless Area would be managed under the existing Forest Plan if Alternative 1 or 2 is implemented. Approximately 57 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 43 percent. The land in the development LUDs provides an estimated 3,098 acres that are suitable for timber production (2 percent of the suitable acres on the Petersburg Ranger District). Approximately 318 of the suitable acres are identified as high-volume, coarse-canopy old growth. The roadless area contains 2,952 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. In addition, the roadless area contains an estimated 44,446 acres of undiscovered locatable mineral resources; 1,467 of the acres are considered to have moderate potential for development. The timber sales, 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 and developments. Cultural and historic values, and the recreation cabins of the area are protected by the Forest Plan.

Under Alternatives 3 or 5, a 32,378-acre portion of the area in Old-growth Habitat, Semi-remote Recreation, Wild/Scenic/Recreation River, Scenic Viewshed, Modified Landscape, and Timber Production LUDs would be converted to Recommended Wilderness. No timber harvest would be allowed and the recreation, minerals, and special use programs could be restricted in the Recommended Wilderness area. Lands suitable for timber production would be reduced to approximately 657 acres. The values associated with the natural settings of the northern half of the roadless area would be provided long-term protection if designated wilderness.

Under Alternative 4, an 18,513-acre portion of the Old-Growth and Semi-remote Recreation LUDs would be converted to Recommended Wilderness. 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. The timber sales, recreation, minerals, and special use programs could continue outside the Recommended Wilderness area, but may be restricted within the area. The values associated with the natural settings of the northernmost portion of the roadless area would be provided long-term protection if designated wilderness.

Under Alternatives 6, 7, or 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area as wilderness would add Congressional protection to approximately 5 percent of the Sumner Strait Volcanics Ecological Subsection that that has very little area represented in wilderness or LUD II. 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 215 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | 32,378 | 18,513 | 32,378 | 52,432 | 52,432 | 52,432 |
| 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 | 11,566 | 11,566 | | | | | | |
| Semi-remote Recreation | 14,798 | 14,798 | 7,136 | 7,852 | 7,136 | | | |
| Recommended LUD II | | | | | | | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | 3,460 | 3,460 | 3,437 | 3,460 | 3,437 | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 4,813 | 4,813 | 43 | 4,813 | 43 | | | |
| Modified Landscape | 8,355 | 8,355 | 4 | 8,355 | 4 | | | |
| Timber Production | 9,440 | 9,440 | 9,434 | 9,440 | 9,434 | | | |
| **TOTAL** | **52,432** | **52,432** | **52,432** | **52,432** | **52,432** | **52,432** | **52,432** | **52,432** |
| Suitable Timber Lands | 3,098 | 3,098 | 657 | 3,098 | 657 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Lindenberg (216)

**ACRES (NFS):** 25,136

**BIOGEOGRAPHIC PROVINCE:** Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Inside Passage Fjordlands and Kupreanof Lowlands

**2003 WILDERNESS ATTRIBUTE RATING:** 18

### I. Overview and Description

**(1) Location and Access:** This area lies on the Lindenberg Peninsula on Kupreanof Island, directly south of the Petersburg Creek-Duncan Salt Chuck Wilderness, between Duncan Canal and the Wrangell Narrows. The city of Petersburg, served by the Alaska Marine Highway and daily jet service, lies approximately 3 air miles to the east, across Wrangell Narrows, and the city of Kupreanof is adjacent to the east side of the area but is not connected by a road system. The area is bounded to the south and along most of the western side by areas developed for timber management.

There are no sites suitable for landing wheeled aircraft or floatplanes in the interior of this area. Saltwater access is by way of the Wrangell Narrows and upper Duncan Canal. The western and southern boundaries can be accessed from an existing road network, which terminates at the Tonka Log Transfer Facility and does not connect to any community. Access to the interior is by helicopter or by foot.

**(2) History:** The area lies within the traditional territory of the Stikine Tlingit. Cultural resources in the area include historic period cabins, mining sites, culturally modified trees and prehistoric period fish traps, villages, and camps. Many of the known sites are on the shoreline or on private property adjacent to the defined roadless area. At least one historic site, a shelter at Warm Fish Lake built in the 1940s, lies in the interior as does the old, primitive Duncan Canal Portage Trail. The trail is no longer part of the Forest Service trail system and has not been maintained for many years. It is very overgrown and difficult to find. Parts of the trail (outside the roadless area) have been obliterated by roads and harvest units. No timber harvest has occurred within the roadless area.

**(3) Geography and Topography:** The landforms of the Lindenberg Roadless Area are predominantly mountainous. Slopes rise steeply from either saltwater or valley bottoms to the ridge tops. Lindenberg Peak, the highest point in the area, is 3,250 feet in elevation. Spruce-hemlock forests are continuous below alpine and extend into the valley drainages. Muskeg is common in areas with flat terrain. The roadless area is bounded to the north by the broad valley of Duncan Creek. The valley extends in an east-west direction from Ohmer Slough on Duncan Canal to a point outside the roadless area near the intersection with Coho Creek, which drains into the Wrangell Narrows. Skoags Creek extends eastward from Lindenberg Peak toward Scow Bay partially on non-National Forest System lands. There are approximately 5 miles of saltwater shoreline. There are 93 acres of alpine and 50 acres of rock but no ice or snow features mapped in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province. This province is generally characterized by rolling, subdued topography and extensive muskeg areas, but may have rugged terrain in localized areas.

Ecological Section/Subsection. The Lindenberg Roadless Area is contained mostly within the Inside Passage Fjordlands Ecological Section (M247E) and also contains a small portion within the Kupreanof Lowlands Ecological Section (M247G). These areas are represented by two ecological subsections (see table below). The Wrangell Narrows Metasediments Ecological Subsection covers almost all of the

Lindenberg Roadless Area. It is typified by mountains of sedimentary origin which have been extensively reshaped by glaciers and glacial deposition. Slopes are forested with hemlock, spruce, and cedar while lodgepole pine and mixed-conifer stands are found in poorly drained soils. Wetlands are common in low relief, depositional areas. Thick peat deposits have accumulated in some sites with poor drainage (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Wrangell Narrows Metasediments | 99% |
| Kupreanof Lowlands | Duncan Canal Till Lowlands | 1% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock and glacial drift. In general, well-drained or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More poorly-drained soils developed on less sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from forested wetlands to open muskeg. Alpine soils, generally above 2,000 feet elevation, are mostly rocky, shallow, very wet organic soils.

**(c) Vegetation:** Muskeg/forested wetland complexes cover the lowlands from north of Mountain Point to the Coho Creek drainage. Approximately 109 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Forested hill slopes are dominated by western hemlock and mixed conifer plant communities. Minor amounts of red cedar are present. There are 93 acres of alpine vegetation mapped for the area.

There are approximately 24,202 acres mapped as forest land of which 11,793 acres or 49 percent are mapped as productive old-growth forest. Of the productive old growth, 5,826 acres or 49 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,008 acres of high-volume, coarse-canopy old growth. There is no second-growth forest where timber harvest has occurred in the past.

**(d) Fish Resources:** The two Alaska Department of Fish and Game (ADF&G) numbered streams in the roadless area produce chum, coho, and pink salmon; steelhead and cutthroat trout; and Dolly Varden char. Duncan Creek is the most productive drainage in the roadless area. The upper watershed of Skoags Creek is the only other stream system in the roadless area.

**(e) Wildlife Resources:** Sitka black-tailed deer and moose are present over most of Kupreanof Island. Suitable habitat for both is available and populations of both are stable and possibly growing. Black bears are abundant on Kupreanof Island. Wolves are located across all habitat types on Kupreanof Island. The mountain lion is present as an incidental species, probably migrating into Southeast Alaska from Canada along large rivers, such as the Stikine River. One mountain lion has been trapped on Kupreanof Island near Totem Bay to the west.

Mink, river otters, beaver, marten, ermine, red squirrel, porcupine, mice, shrews, and voles are well distributed over Kupreanof Island. Fishers and wolverines are incidental species. The northern flying squirrel has been migrating to Kupreanof Island but is not yet well distributed on the island.

Bald eagles, northern goshawks, ospreys, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, spruce grouse, and ptarmigan all occur on Kupreanof Island. Bats are present during the summer months and occasionally over winter in man-made structures.

Numerous species of ducks and geese, sandhill cranes, trumpeter swans, marbled murrelets, and great blue herons occur in and around Kupreanof Island, both during migration and, in some cases, during the nesting season.

Red-throated, Pacific, and common loons all occur on Kupreanof Island. Several plover, yellowlegs, and sandpiper species occur, mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Amphibians known to occur on Kupreanof Island include the rough-skinned newt and western toad. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts.

Sea mammals known to inhabit the waters surrounding Kupreanof Island are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal.

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

| LUD | Acres |
|---|---|
| Timber Production | 11,244 |
| Modified Landscape | 5,017 |
| Scenic Viewshed | 6,362 |
| Old-growth Habitat | 2,513 |

The majority of the roadless area, approximately 90 percent, was allocated to a development LUD (Timber Production, Modified Landscape, Scenic Viewshed). The interior of the Lindenberg Peninsula is allocated to the Timber Production LUD, which accounts for approximately 45 percent of the roadless area. In the northeast corner of the area around Wrangell Narrows, approximately 25 percent of the roadless area was allocated to the Scenic Viewshed LUD. Approximately 20 percent of the roadless area was allocated to the Modified Landscape LUD. This LUD in located in parts of the less visible land in the northeast and interior.

Approximately 10 percent of the roadless area was allocated to one non-development LUD, the Old-growth Habitat LUD. Land allocated to this LUD is located in the northwest section, near the mouth of Duncan Creek.

The Lindenberg Roadless Area, along with Roadless Area #217, was analyzed for timber harvest and road construction in the mid 1990s as part of the South Lindenberg Timber Sale(s) EIS. The resulting decision allowed for multiple sales in these areas. The sales that already have been sold under this EIS include: South Lindenberg, South Lindenberg One, Tatonka, Dakota, South Lindenberg Mountain, South Park, South Central, South Saddle, and South Sand. The South Lindenberg Timber Sale will extend the existing road system into the northern portion of the roadless area. The South Lindenberg Mountain Timber Sale will affect the extreme southeastern section. Other smaller sales, some of which are currently under contract, and others that will be offered in the near future, will affect portions of the roadless area adjacent to existing roads and harvest units. The 10-year timber sale schedule has other timber sales proposed in this area.

The primary recreation uses of the area include moose and deer hunting, coho salmon and steelhead fishing, camping, and viewing scenery from marine waters. Area residents also participate in subsistence deer hunting in the roadless area. There is one developed recreation site, a three-sided shelter at Warm Fish Lake built during the 1940s. There was no recorded use of the area by outfitters or guides in 2000. Recreation use is moderate. Most recreation use is in the Duncan Pass area, especially by residents of Petersburg and Kupreanof. There are no public recreation

cabins in the roadless area; however, there are three special use permits for private cabins. The Duncan Creek fishpass, located 1.5 miles upstream from saltwater, was constructed in 1999.

**(6) Appearance (Apparent Naturalness):** The area is mostly unmodified. However, harvest units and roads adjacent to the roadless area are visible from Duncan Canal, a key travelway. The existing visual condition of the area is predominantly natural; however, the extensive developed areas along the boundaries affect the appearance of adjacent portions of the roadless area.

**(7) Surroundings (External Influences):** The area is close to the community of Petersburg. The Petersburg Creek-Duncan Salt Chuck Wilderness directly adjoins the Lindenberg Roadless Area to the north. The city of Kupreanof and the State of Alaska own the majority of land along Coho Creek and adjacent to the Wrangell Narrows. Private development on these lands could influence the setting. Areas developed for timber management border the roadless area to the west and south and extend deep into the area in the northwest, nearly dividing the roadless area in two. Duncan Pass is a primary flight route for air charter companies based in Petersburg.

**(8) Attractions and Features of Special Interest:** The area contains two inventoried recreation places that cover 475 acres, or 2 percent of the roadless area. The area is immediately adjacent to saltwater and the major creeks are valued for recreation uses such as moose, deer, and black bear hunting; hiking; and beach combing. Sport fishing and sightseeing is popular on Duncan Creek.

**(9) Differences Between the 1989 and 2003 Roadless Area Boundary:** There are differences on the western and southern boundaries (mostly minor) that result from more closely following the edge of the developed area. Because of this, the 2003 roadless area is larger than the 1989 version.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is essentially unmodified. Areas adjacent to private land are likely to change in character as development occurs. The land in the roadless area has a mostly natural appearance; however, the landscape is influenced by the developments along the west and south boundaries. Developments from the west and lands owned by the city of Kupreanof and the State of Alaska on the east nearly divide the area in two.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a moderately high opportunity for solitude and primitive recreation in the Lindenberg Roadless Area, primarily because of the proximity to the Petersburg Creek Duncan Salt Chuck Wilderness. Floatplanes and powerboats may disrupt visitors for brief periods, as could scheduled commercial airline flights to and from Petersburg. Fishing, hunting, and sightseeing are the basic recreation opportunities found in this semi-primitive setting. The area is accessible by boat from the city of Petersburg in less than one-half hour. Present recreation use levels are moderate compared to recreation activity across the Petersburg Ranger District, and are concentrated in specific locations adjacent to major creeks and drainages, and along the adjacent road system. A visitor camped on a creek in the area would have a low chance of seeing or being seen by other visitors in the area.

Travel within the area is moderately challenging, with some steep, rugged areas. 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 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) | 51 | 0% |
| Semi-Primitive Non-Motorized (SPNM) | 17,078 | 68% |
| Semi-Primitive Motorized (SPM) | 2,001 | 7% |
| Roaded Natural (RN) | 243 | 1% |
| Roaded Modified (RM) | 5,763 | 23% |

The area contains two inventoried recreation places that cover 475 acres, or 2 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPNM | 0 | 0 |
| SPM | 2 | 356 |
| RN | 0 | 0 |
| RM | 1 | 119 |

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

There is one developed recreation site at Warm Fish Lake. There was no recorded use of the area by outfitters or guides in 2000. Recreation use levels are moderate compared to recreation use on the Petersburg Ranger District as a whole. Most use is along Duncan Creek and Coho Creek, near saltwater, and on the road system just outside 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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Lindenberg Roadless Area was given a rating of 24 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. The lower score reflects ongoing developments in the roadless area and activities and uses associated with the proximity of the area to Petersburg.

**(4) Ecologic and Geologic Values:** There are no unique ecologic or geologic values in the area. The roadless area is relatively small and irregularly shaped. However, it adjoins the Petersburg-Duncan Salt Chuck Wilderness to the north.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) lists VCU 447 along Wrangell Narrows as a primary producer of salmon and of sport fish. The Duncan Creek drainage originates in the north central portion of the roadless area and flows westward into Duncan Canal. It has 31 stream miles that are classified as Class I or II. Chum, coho, and pink salmon; steelhead and cutthroat trout; and Dolly Varden char are present in the stream. A 30-foot high waterfall is located about 2 miles upstream of the mouth of the creek. A barrier modification was completed in 2000 to allow anadromous fish passage above the falls. As of fall 2001, adult coho salmon and anadromous Dolly Varden char are accessing upstream waters.

Skoags Creek produces both recreational and commercial fishing opportunities. The ADF&G has documented the presence of all salmonid species native to the Lindenberg Peninsula, except steelhead. Pink salmon production is best on the southern Lindenberg Peninsula, with escapement upwards of 4,200. Although the lower section of Skoags Creek is outside the roadless area, the upper watershed includes 11 miles of Class I and II streams.

**(b) Wildlife Resources:** South Lindenberg Peninsula forms a migration corridor with the south part of Mitkof Island and Woewodski Island for species migrating down the Stikine River valley. This migration pattern has resulted in species that recently (in the past few decades) immigrated to the islands to the west. This area is also allowing the dispersal of elk, a non-native species that was introduced to Etolin Island in the south to colonize islands within these biogeographic provinces. This migration route also extends to the north and across the isthmus of Kupreanof Island to allow access to the middle of the island.

Sitka black-tailed deer and moose are present on the South Lindenberg Peninsula. Suitable habitat for both is available and populations of both are stable and possibly growing. Black bears are abundant within this roadless area. This area is popular for hunting by residents of Kupreanof and Mitkof Islands. Based on harvest data compiled from 1985 to 1995, VCU 447 along Wrangell Narrows, was ranked in the second 25 percent of brown bear harvest areas on the Tongass. Several people trap furbearers along the shoreline and road system.

Northern goshawks are known to nest within this area and the small bays provide habitat for nesting waterfowl. Humpback whales have been observed both in Duncan Canal and the Wrangell Narrows.

Numerous species of ducks and geese, sandhill cranes, trumpeter swans, marbled murrelets, and great blue herons occur in and around this roadless area, both during migration and, in some cases, during the nesting season.

**(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). Humpback whales have been observed both in Duncan Canal and the Wrangell Narrows. Steller sea lions may be 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 are known to nest within the roadless area. In addition, 12 sensitive plant species are known or suspected to occur in the Petersburg 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 unique scientific or educational values identified in this roadless area.

**(6) Scenic Values:** The overall area is mostly natural appearing with a landscape that is, for the most part, common. Developed areas can be viewed from many of the higher elevations in the area. The unmodified eastern mountain ridge in the roadless area can be seen from the Wrangell Narrows. Development on private land along the shore modifies the view from the Wrangell Narrows. Traveling down Duncan Canal, an observer would view the roadless area's peaks, but also the timber harvest on the adjacent land.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Wrangell Narrows, which is a tour ship route and a part of the Alaska Marine Highway, and Duncan Canal, which is a small boat route and a saltwater use area up to Indian Point.

Nine percent of this roadless area is inventoried Variety Class A (possessing landscape diversity that is unique for the character type). About 69 percent of this area is inventoried Variety Class B (possessing landscape diversity that is common for the character type), and the remaining 22 percent is inventoried Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, 75 percent, has an Existing Visual Condition (EVC) Type I , where only ecological change has occurred. About 1 percent has an EVC of III, where changes in the landscape are seen by the average person, but they do not attract attention. Nine percent of the area is in EVC Type IV, where changes in the landscape are easily noticed by the average person and may attract some attention. They appear to be disturbances but resemble natural patterns. About 15 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.

**(7) Social, Cultural, and Historical Values:** The area lies within the traditional territory of the Stikine Tlingit. Cultural resources in the area include historic period cabins, mining sites, culturally modified trees and prehistoric period fish traps, villages and camps. Many of the known sites are on the shoreline or on private property adjacent to the roadless area. At least one historic site, a three-sided shelter built in the 1940s, lies in the interior, as does the old, primitive Duncan Canal Portage Trail.

The area is approximately 3 miles east of the city of Petersburg. The city of Kupreanof is on the eastern boundary of the roadless area. There are no public recreation cabins or developed trails in the roadless area. No outfitter/guide permits were issued for this area in 2000. Special use permits have been issued for three private cabins on the south side of Ohmer Slough, which is just outside the roadless area. The South Lindenberg EIS timber sales will develop a road system and harvest timber in the northern and southeastern portions of the roadless area. VCU 447, along Wrangell Narrows, was listed among the VCUs with highest community use value and with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** This roadless area is adjacent to the community of Kupreanof, and to land owned by the State of Alaska and the city of Petersburg. This will most likely lead to continued development of homesites, which may not be compatible with management of portions of the area as roadless or wilderness in the long term. On the other hand, the northern boundary of this roadless area directly adjoins the Petersburg Creek-Duncan Salt Chuck Wilderness. This enhances the ability to maintain the roadless, undeveloped character of both areas. Except along the northern wilderness boundary and small segments of the western and eastern boundaries along saltwater, the area does not have natural boundaries. Feasibility of management in a roadless condition is fair. The South Lindenberg Timber Sale will extend the existing road system into the northern portion of the roadless area. The South Lindenberg Mountain Timber Sale will affect the extreme southeastern section. Other smaller sales, some of which are currently under contract, and others that will be offered in the near future, will affect portions of the roadless area adjacent to existing roads and harvest units. The 10-year timber sale schedule has other timber sales proposed in this area.

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

**(1) Recreation, Including Tourism Potential:** Recreation potential for the Lindenberg Roadless Area is high, due to the proximity to Petersburg and the adjacent wilderness. Petersburg is a popular tourist destination for people from outside of Alaska. There is potential for outfitter and guide permits, and development of cabins and/or shelters. Additional opportunities for trails would create more loop options, and could increase the diversity of settings and ecotypes encountered.

**(2) Subsistence Uses:** Continued management in an unroaded condition or management as a wilderness would not conflict with current subsistence uses.

**(3) Fish Resources:** There are two fish enhancement projects on Duncan Creek, including coho stocking and barrier modifications at three complete or partial barrier complexes. The barrier downstream was modified in 2000. The middle barrier was planned to be modified in 2002. The third (uppermost) barrier is currently being evaluated for possible modification.

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

**(5) Timber Resources:** There are approximately 11,793 acres inventoried as productive old-growth forest in the roadless area. There is no mapped second-growth timber due to harvesting. Of this, approximately 8,695 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), 4,639 acres (18 percent) of this roadless area are estimated to be suitable for timber production. Approximately 2,759 of the suitable acres are mapped as high-volume old growth; of these acres, 368 are mapped as high-volume, coarse-canopy old growth.

The South Lindenberg EIS timber sales are scheduled to harvest timber in and near the roadless area. The sales would extend the existing road system from adjacent developed areas into the roadless area in the northern and southeastern portions. The sales that already have been sold under this EIS include: South Lindenberg, South Lindenberg One, Tatonka, Dakota, South Lindenberg Mountain, South Park, South Central, South Saddle, and South Sand. The 10-year timber sale schedule has other timber sales proposed 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 areas with high mineral development potential; however, the area does have mineral exploration potential. The roadless area contains an estimated 1,751 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 travel corridors identified in the roadless area. The timber sales currently under contract and future timber sales from the South Lindenberg EIS will continue to develop the road system in order to harvest timber in the northern portion of the roadless area and in the southeastern part. There are no power transmission corridors identified within the roadless area; however, a potential corridor has been identified near the southern boundary.

**(9) Water Availability and Use:** There are no recreation or other facilities located in this roadless area. As a result, demand does not currently exist for domestic water use. This may change as recreation cabins within the roadless area and residences on private land along the eastern boundary are developed. There are no existing or planned hydroelectric or domestic water projects.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** No land use authorizations are currently issued for this roadless area.

**(12) Land Status:** All land within the roadless area is part of the National Forest System.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Many local residents want this area to remain unroaded and undeveloped. Other resident enjoy using the road system and want to see a more extensive system. Small timber operators have successfully bought and sold timber from some of the small sales in this area and would like a sustained local supply from here and Mitkof Island.

**(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 Lindenberg Roadless Area. In 2001, HR 2908 proposed that the northern portion of the roadless area be designated as an addition to the Petersburg Creek-Duncan Salt Chuck Wilderness. The remainder of the roadless area would be managed in an unroaded condition as LUD II under this bill.

**(c) Public Input During Forest Plan Revision and Appeals:** In 1996, the Southeast Alaska Conservation Council recommended managing the area to preserve its integrity. They felt that the area merited special protection for its outstanding wildlife, fish, hunting, subsistence, recreation, and tourism values. The Narrows Conservation Council felt that the upper Duncan Canal area should be managed under

the Primitive Recreation LUD because it is the largest estuary in Southeast Alaska. However, timber industry organizations felt that there was no justification for this.

Some comments suggested managing the area as wilderness and others as an old-growth reserve. One commenter wanted the area managed as a Developed Recreation LUD, while another wanted the existing developed recreation facilities maintained before new facilities were added. Several comments wanted the Forest Service to provide the strongest possible protection for the area. There were also general comments on Kupreanof Island. Some commenters wanted all unroaded areas developed and some wanted all unroaded areas protected. Some favored designating all unroaded lands as wilderness and some wanted them managed as roadless areas for remote recreation.

**(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, while others wanted the current level of development to continue.

**(e) Public Input Expressed for Project-level EISs and Other Input:** In response to the South Lindenberg Timber Sale EIS, the Narrows Conservation Council and the Southeast Alaska Conservation Council felt that the northern portion of the roadless area should be protected from road building and logging. The City of Kupreanof stated that new roads would be contrary to their goal of maintaining a roadless community. Others commented that roads and timber harvest would be bad for wildlife, subsistence, and/or recreation. Owners of adjacent land were concerned that roads would adversely affect the drinking water supply for homes they plan to build on their property, as well as disturb the wilderness-like setting. Comments on the Kupreanof Island Analysis ranged from favoring protection of the area from logging and road building to increasing timber harvest.

**(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 Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 216 for permanent protection as LUD II. SEACC recommended that the remaining unlogged portions of the Lindenberg Peninsula of Kupreanof Island be designated LUD II to safeguard the area's valuable fish and wildlife habitat. They indicated that the northern portion of the Lindenberg Roadless Area should be designated wilderness and added to the adjoining Petersburg Creek/Duncan Salt Chuck Wilderness.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The northern boundary of the Lindenberg Roadless Area adjoins the Petersburg Creek-Duncan Salt Chuck Wilderness. The remaining roadless units on Kupreanof Island are separated from the area by saltwater or developed areas.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 115 | 125 |
| Petersburg (Pop. 3,224) | 3 | 5 |
| Wrangell (Pop. 2,308) | 30 | 45 |
| Ketchikan (Pop. 14,070) | 100 | 125 |

Wrangell and Petersburg are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Lindenberg Roadless Area lies on the Lindenberg Peninsula on Kupreanof Island, directly south of the Petersburg Creek-Duncan Salt Chuck Wilderness, between Duncan Canal and the Wrangell Narrows. The city of Petersburg lies approximately 3 air miles to the east, across Wrangell Narrows, and the city of Kupreanof is adjacent to the east side of the area but is not connected by a road system. The area is bounded to the south and along most of the western side by areas developed for timber management. Landforms along this area are characterized by steep mountain slopes divided by broad valleys. The highest peak rises to 3,250 feet above sea level.

The area itself is mostly unmodified; however, it is heavily influenced by ongoing developments and activities on adjacent lands. The area has high natural integrity and moderate apparent naturalness. The opportunity for solitude is moderate and the opportunity for primitive recreation is high.

Approximately 9 percent of the landscape of the area is considered distinctive for the character type from a scenery standpoint. The area has no other significant or unique wilderness attributes.

The roadless area includes about 5,826 acres of high-volume, old-growth forest. Of these acres, 1,008 are mapped as high-volume, coarse-canopy old growth.

The Lindenberg Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 3 percent of the province. It is one of 12 inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The Lindenberg Roadless Area lies within two ecological sections; it represents 1 percent of the Inside Passage Fjordlands Ecological Section and less than 0.1 percent of the Kupreanof Lowlands 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, while 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 vast majority (99 percent) of the roadless area is in the Wrangell Narrows Metasediments Ecological Subsection; this portion of the roadless area represents 8 percent of the entire ecological subsection that has portions protected by existing wilderness (11 percent) and other non-development LUDs (18 percent). Less than 1 percent of the roadless area is in the Duncan Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents 0.1 percent of the entire ecological subsection, 5 percent of which is in existing wilderness and is well represented by other existing non-development LUDs (35 percent).

The Lindenberg 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 eight other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for managing the area in an unroaded condition, but very little support for designating the area as wilderness. Designation would create a wilderness with few significant or unique wilderness attributes. The northern portion of the roadless area would add to the size of the Petersburg Creek-Duncan Salt Chuck Wilderness. The roadless area includes several timber sales authorized under the South Lindenberg FEIS, many of which are under contract. 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 Lindenberg Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 is implemented. Approximately 10 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 90 percent. The land in the development LUDs provides an estimated 4,639 acres that are suitable for timber production (3 percent of the suitable acres on the Petersburg Ranger District). Approximately 368 of the suitable acres are classified as high-volume, coarse-canopy old growth. Timber sales under contract and future sales would continue. The roadless area contains an estimated

1,751 acres of undiscovered locatable mineral resources. All of these acres are considered to have low potential for development. The timber sales, recreation, minerals, and special use programs would continue. Values associated with the natural settings of the roadless area could be affected by ongoing development activities.

Under Alternative 6, a 17,042-acre portion of roadless are would be converted to Recommended Wilderness LUD and the remainder, approximately 8,094 acres, would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions in the Recommended LUD II area and would be restricted in the Recommend Wilderness area. No timber harvest would be allowed. The values associated with the natural settings of the roadless area would receive long-term protection if designated LUD II or wilderness.

Under Alternative 7, an 8,094-acre portion of Old-growth Habitat, Modified Landscape, and Timber Production LUDs would be converted to Recommend Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special use programs would be restricted in the Recommend Wilderness area. Lands suitable for timber production would be reduced to approximately 3,332 acres. The values associated with the natural settings of the roadless area would receive long-term protection if designated wilderness

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber sales would be allowed and the ongoing recreation, minerals, and special uses 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 receive long-term protection if designated wilderness.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 216 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | 8,094 | 8,094 | 25,136 |
| 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 | 2,513 | 2,513 | 2,513 | 2,513 | 2,513 | | | |
| Semi-remote Recreation | | | | | | | | |
| Recommended LUD II | | | | | | 17,042 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 6,362 | 6,362 | 6,362 | 6,362 | 6,362 | | 6,362 | |
| Modified Landscape | 5,017 | 5,017 | 5,017 | 5,017 | 5,017 | | 4,858 | |
| Timber Production | 11,244 | 11,244 | 11,244 | 11,244 | 11,244 | | 5,822 | |
| **TOTAL** | **25,136** | **25,136** | **25,136** | **25,136** | **25,136** | **25,136** | **25,136** | **25,136** |
| Suitable Timber Lands | 4,639 | 4,639 | 4,639 | 4,639 | 4,639 | 0 | 3,332 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Green Rocks (217)

**ACRES (NFS):** 11,059

**BIOGEOGRAPHIC PROVINCE:** Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Inside Passage Fjordlands and Kupreanof Lowlands

**2003 WILDERNESS ATTRIBUTE RATING:** 19

### I. Overview and Description

**(1) Location and Access:** The area is located at the southern tip of the Lindenberg Peninsula of Kupreanof Island, between Wrangell Narrows and Duncan Canal. The area is within 10 miles of the City of Petersburg which is served by the Alaska Marine Highway and daily jet service. Roadless areas exist to the south, across Wrangell Narrows, and to the west, across Duncan Canal. A road system that nearly crosses the island separates this roadless area from the Lindenberg Roadless Area (216) and the Petersburg Creek/Duncan Salt Chuck Wilderness to the north. The northern and western portions of the roadless area can be accessed from these roads. The area borders private land with residential homes to the northeast and Beecher Pass State Marine Park, which is undeveloped, to the south. Saltwater access by boat or floatplane is by way of Wrangell Narrows (a part of the Alaska Marine Highway), Duncan Canal, and Beecher Pass. There are no sites suitable for landing wheeled aircraft. Access to the interior of the roadless area is by foot or by helicopter.

**(2) History:** The area lies within the traditional territory of the Stikine Tlingit. Known cultural resources in the area include historic period cabins, culturally modified trees, prehistoric period fish traps, villages and camps. The identified cultural resources occur on the shoreline, and are often on private lands. The Green Rocks area was a popular recreation destination in the early 1900s for area residents. Green Rocks Lake was known by local people as Mary's Lake, for Mary Allen, whose family lived near Green Rocks. A saltery and floating cannery operated in Beecher Pass at the turn of the century. A minor amount of beach logging occurred along Duncan Canal.

**(3) Geography and Topography:** The area is comprised of one major drainage, Colorado Creek. This area encompasses the southern tip of Lindenberg Peninsula and is very similar in description to the Lindenberg Roadless Area (216). As with the Lindenberg Roadless Area, it is bordered to the north by a valley feature. Mitchell Creek extends in an east-west direction from Mitchell Slough on Duncan Canal to the Tonka road terminus at Wrangell Narrows. Mountainous terrain is predominant. The area has an almost continuous forest cover on the mountain slopes. This area contains slightly less percentages of muskeg and alpine environments than the Lindenberg Roadless Area. This area contains 7 miles of shoreline and 30 acres of islands. There are no ice, alpine, or rock features mapped in this area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province. The area is generally characterized by rolling, subdued topography and extensive muskeg areas.

Ecological Section/Subsection. The Green Rocks Roadless Area is contained mostly within the Inside Passage Fjordlands Ecological Section (M247E) and also contains a small portion within the Kupreanof Lowlands Ecological Section (M247G). These areas are represented by two ecological subsections (see table below). The Wrangell Narrows Metasediments Ecological Subsection covers the majority of the Green Rocks Roadless Area. It is typified by mountains of sedimentary origin which have been extensively reshaped by glaciers and glacial deposition. Slopes are forested with hemlock, spruce, and cedar while lodgepole pine and mixed-conifer stands are found in poorly drained soils. Wetlands are common in low

relief, depositional areas. Thick peat deposits have accumulated in some sites with poor drainage. The balance of the roadless area is within the Duncan Canal Till Lowlands Ecological Subsection, a low relief landscape of high precipitation and depositional soils with an abundance of wetlands (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Wrangell Narrows Metasediments | 94% |
| Kupreanof Lowlands | Duncan Canal Till Lowlands | 6% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg. Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Typical Sitka spruce and western hemlock forest covers the area, and is concentrated on the steep landform on the northern and western portions. Low-lying, interior portions of the area are muskeg. Approximately 396 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 10,638 acres mapped as forest land of which 5,048 acres or 47 percent are mapped as productive old-growth forest. Of the productive old growth, 2,377 acres or 47 percent are mapped as high-volume old-growth forest. The productive old growth includes about 357 acres of high-volume, coarse-canopy old growth. There are approximately 37 acres of second-growth forest where beach logging has occurred in the past.

**(d) Fish Resources:** Colorado Creek is the only large stream in the roadless area and it is the most productive stream. Species present in this area include chum, coho, and pink salmon; steelhead and cutthroat trout; and Dolly Varden char.

**(e) Wildlife Resources:** Sitka black-tailed deer and moose are present over most of Kupreanof Island. Suitable habitat for both is available and populations of both are stable and possibly growing. Black bears are abundant on Kupreanof Island. Wolves are located across all habitat types on Kupreanof Island. The mountain lion is present as an incidental species, probably migrating into Southeast Alaska from Canada along large rivers, such as the Stikine River. One mountain lion has been trapped on Kupreanof Island.

Mink, river otters, beaver, marten, ermine, red squirrel, porcupine, mice, shrews, and voles are well distributed over Kupreanof Island. Fishers and wolverines are incidental species. The northern flying squirrel has been migrating to Kupreanof Island but is not yet well distributed on the island.

Bald eagles, northern goshawks, ospreys, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, spruce grouse, and ptarmigan all occur on Kupreanof Island. Bats are present during the summer months and occasionally over winter in man-made structures.

Numerous species of ducks and geese, sandhill cranes, trumpeter swans, marbled murrelets, and great blue herons occur in and around Kupreanof Island, both during migration and, in some cases, during the nesting season.

Red-throated, Pacific, and common loons all occur on Kupreanof Island. Several plover, yellowlegs, and sandpiper species occur, mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Amphibians known to occur on Kupreanof Island include the rough-skinned newt and western toad. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts.

Sea mammals known to inhabit the waters surrounding Kupreanof Island are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion and harbor seal. Sea otters are expanding their range northward into Keku Strait, but are only locally abundant in the western areas of Sumner Strait off southern Kupreanof 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, 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 | 492 |
| Scenic Viewshed | 499 |
| Modified Landscape | 100 |
| Transportation and Utility System | NA |
| Old-growth Habitat | 9,968 |

Approximately 10 percent of the roadless area (not including the LUD overlay) was allocated to a development LUD (Timber Production, Scenic Viewshed, Modified Landscape). The Timber Production LUD was assigned to approximately 4 percent of the roadless area, located in the north interior section adjacent to existing harvested units. A section of the area near the Wrangell Narrows was allocated to the Scenic Viewshed LUD, which accounts for approximately 5 percent of the roadless area. Approximately 1 percent of the roadless area was allocated to the Modified Landscape LUD. Pockets of this LUD are in the northeast and northwest corners of the roadless area. A potential powerline corridor, follows the roads across the Lindenberg Peninsula just north of the area, which was assigned to the Transportation and Utility System LUD overlay.

The majority of the roadless area, approximately 90 percent, was allocated to one non-development LUD. The Old-growth Habitat LUD is this widely allocated non-development LUD.

This roadless area, along with the Lindenberg Roadless Area (216), was analyzed for timber harvest and road construction in the mid-1990s. The resulting decision allowed for multiple sales in these areas. The South Lindenberg Mountain Timber Sale, which has already been sold, will extend the existing road system into the northeastern portion of the roadless area. The Dakota Timber Sale has been harvested, and the South Central Timber Sale is presently being harvested. Other smaller sales that will be offered in the near future will extend existing roads.

Non-National Forest System land containing private residences border the Wrangell Narrows to the northeast and Beecher Pass to the south. Recreation uses include deer and waterfowl hunting, and hiking. There is a one-mile trail, currently in poor condition, from saltwater to Green Rocks Lake. Comments for the South Lindenberg Timber Sale(s) EIS indicate that local residents, especially those living on the Lindenberg Peninsula, use this area

extensively for subsistence activities such as deer hunting. Beecher Pass State Marine Park, which is currently undeveloped, lies to the south.

**(6) Appearance (Apparent Naturalness):** The area generally appears unmodified. However, roads and harvest units and private residences are visible from Duncan Canal and the Wrangell Narrows. Harvest units and roads adjacent to Duncan Canal and along the northern boundary, affect the appearance of nearby areas within the roadless area.

**(7) Surroundings (External Influences):** The area is within 10 miles by air or water of the city of Petersburg. In 1980, the State of Alaska sold numerous parcels of land, through the land lottery program, along the northeastern and southern boundary of the roadless area. Some of these land owners have built permanent, year-round residences on their property. Beecher Pass State Marine Park, an undeveloped area, lies to the south. The Alaska Marine Highway ferries and other commercial and recreation boat traffic pass within one-quarter mile of the east side of the area as they travel through the Wrangell Narrows. Extensive development has occurred along the north and northwest boundaries of the area.

**(8) Attractions and Features of Special Interest:** The area contains four inventoried recreation places that cover 678 acres, or 6 percent of the roadless area. Green Rocks Lake, Green Rocks Trail, and several popular waterfowl hunting areas provide the greatest attraction to the recreating public. The scenery of the area is typical of much of the lowlands of Southeast Alaska.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** There have been several changes to the boundaries since 1989. An old harvest unit along the southwest shore has been included in the roadless area. Areas in the north, which have been roaded, and land in the northeast, which has been conveyed to the State of Alaska, have been removed from the roadless area. Small adjustments have been made to the boundary along the developed areas 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 is unmodified except for the Green Rocks Trail. The area is adjacent to areas developed for timber management on the north and northwest. Most of the roadless area has a natural appearance (57 percent). However, 40 percent of the area is inventoried as having changes in the landscape, which are easily noticed and may attract some attention or appear to be major disturbances. The area contains landscape features common for the area.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a moderate opportunity for solitude within the area. Low-flying airplanes traveling to and from Petersburg, Alaska State ferries, and recreational and commercial boaters may, at times, pass near the area and be observed by people in this roadless area. The area is accessible by boat from the community of Petersburg in less than 1 hour and from the community of Wrangell in approximately 2 hours. Present recreation use levels are low except around the trail. Generally, a person camping or traveling inland is unlikely to see others. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity, except for the frequent sound of airplanes flying over or boats passing nearby.

Travel within the area is less challenging than in most roadless areas in Southeast Alaska. Much of the eastern portion of the roadless area is flat. The Green Rocks Trail provides access to the Green Rocks 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 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 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 |
|---|---|---|
| Semi-Primitive Non-Motorized (SPNM) | 4,030 | 36% |
| Semi-Primitive Motorized (SPM) | 4,163 | 38% |
| Roaded Natural (RN) | 469 | 4% |
| Roaded Modified (RM) | 2,397 | 22% |

The area contains four inventoried recreation places that cover 678 acres, or 6 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| SPNM | 1 | 130 |
| SPM | 1 | 80 |
| RN | 2 | 468 |
| RM | 0 | 0 |

The Green Rocks trail is the only recreation facility 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 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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Lindenberg 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 reflects the effects that the developments adjacent to the area have on the potential wilderness attributes, in conjunction with the relatively small size of the area.

**(4) Ecologic and Geologic Values:** There are no unique ecologic or geologic values in the area. The roadless area is relatively small and not connected to any other roadless areas or wildernesses.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) lists VCU 447 along Wrangell Narrows as a primary salmon producer and VCUs 447 and 448, both along Wrangell Narrows, as a primary sport fish producer. Both of these VCUs include streams that are outside the boundaries of the roadless area.

Colorado Creek, located in the eastern portion of the roadless area, flows into Wrangell Narrows. The stream network includes 11 miles of Class I and II streams. ADF&G has documented the presence of coho and pink salmon and Dolly Varden char.

**(b) Wildlife Resources:** South Lindenberg peninsula forms a migration corridor with the south part of Mitkof Island and Woewodski for species migrating down the Stikine River valley. This migration pattern has resulted in species that recently (in the past few decades) immigrated to the islands to the west. This area is also allowing the dispersal of elk, a non-native species that was introduced to Etolin Island in the south to colonize islands within these biogeographic provinces. There is a key wildlife movement corridor from the southern tip of the Lindenberg Peninsula across to Mitkof Island.

Sitka black-tailed deer and moose are present on the South Lindenberg peninsula. Suitable habitat for both is available and populations of both are stable and possibly growing. The Colorado Creek drainage is recognized as high-value deer winter habitat. Black bears are abundant with in this roadless area. This area is popular for hunting by residents of Kupreanof and Mitkof Islands. Based on harvest data compiled from 1985 to 1995, VCU 447 along Wrangell Narrows, was ranked in the second 25 percent of black bear

harvest areas on the Tongass (ADF&G, 1998). Several people trap furbearers along the shoreline and road system.

Great blue heron are known to nest within this area and the small bays provide habitat for nesting waterfowl. Humpback whales have been observed both in Duncan Canal and the Wrangell Narrows. Numerous species of ducks and geese, sandhill cranes, trumpeter swans, marbled murrelets, and great blue herons occur in and around this roadless area, both during migration and, in some cases, during the nesting season.

**(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. Ospreys have nested along Wrangell Narrows near Finger Point. 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 Petersburg Ranger District.

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

**(5) Scientific and Educational Values:** There are no unique scientific or educational values identified in the area.

**(6) Scenic Values:** Most of the area has a natural appearance and is unmodified, except for the Green Rocks Trail and the residences on adjacent private lands. Lands on the eastern portion are gently rolling with muskegs. The western portion, along Duncan Canal, contains gently rolling landscapes which rise to timbered hillsides up to 2,600 feet. The northwest side of the roadless area (adjacent to Duncan Canal) has been developed.

Visual Priority Routes and Use Areas identified in the Forest Plan that are within or adjacent to the roadless area include: Wrangell Narrows, a portion of the Alaska Marine Highway and a tour ship route; Duncan Canal, a small boat route and saltwater use area; and Beecher Pass State Marine Park.

Approximately 4 percent of this roadless area is inventoried Variety Class A (possessing landscape diversity that is unique for the character type). About 65 percent of the area is inventoried Variety Class B (possessing landscape diversity that is common for the character type) and 30 percent is inventoried Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, 65 percent, is Existing Visual Condition (EVC) Type I, where only ecological change has occurred. Two percent of this roadless area is EVC Type III, where the average forest visitor notices changes in the landscape, but the natural appearance of the landscape remains dominant. Four percent of the area is in EVC Type IV, where changes in the landscape are easily noticed by the average person and may attract some attention. They appear to be disturbances but resemble natural patterns. About 29 percent is 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:** The area lies within the traditional territory of the Stikine Tlingit. Known cultural resources in the area include historic period cabins, culturally modified trees, prehistoric period fish traps, villages and camps. The identified cultural resources occur on the shoreline, and are often on private lands. The Green Rocks area was a popular recreation destination in the early 1900s for area residents. Green Rocks Lake was known by local people as Mary's Lake, for Mary Allen, whose family lived near Green Rocks, which is accessed by the Green Rocks Trail. A saltery and floating cannery operated in Beecher Pass at the

turn of the century. The South Lindenberg Mountain Timber Sale and the Dakota Timber Sale will extend the existing road system into the northern portion of the area and harvest timber. Recreation use is low, except at Green Rocks Lake and along the trail. Scoping comments for the South Lindenberg Timber Sale(s) EIS indicated that local residents, especially those living on the Lindenberg Peninsula, use the area extensively for fishing, hunting, and gathering. VCU 447 along the Wrangell Narrows was listed among the VCUs with the highest community use values. VCUs 447 and 448, both along Wrangell Narrows, 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 area in 2000.

**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** The area is bounded by saltwater and private land to the east and south and developed areas to the north. The west side is bounded by a combination of developed areas and saltwater. Except along the shore, the boundaries do not follow topographic features. Most of the area is managed as an old-growth reserve. Managing the area as wilderness can be consistent with managing the area as an old-growth reserve. Portions of the roadless area are allocated to LUDs that permit development. Wilderness designation would not be consistent with road building and timber management. Except for the areas adjacent to saltwater, there are no natural, well defined boundaries. The relatively small size of the area does not allow absorption of effects on potential wilderness attributes on adjacent lands.

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

**(1) Recreation, Including Tourism Potential:** There does not appear to be a large potential for outfitter and guide permits. There is potential for developed trails and public recreation cabins or shelters, perhaps near Green Rocks Lake. Tourism has been increasing in Southeast Alaska. The roadless area is near Petersburg, a common tourist destination. An increasing number of trail users are from outside of Southeast Alaska.

**(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 improvement projects currently planned in the roadless area.

**(5) Timber Resources:** There are approximately 5,048 acres of productive old-growth forest and 37 acres of second growth due to timber harvest mapped in the roadless area. Of this, approximately 3,487 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), 337 acres, or 3 percent, of this roadless area are estimated to be suitable for timber production. Approximately 250 of the suitable acres are mapped as high-volume old growth; of these acres, 58 are mapped as high-volume, coarse-canopy old growth.

The South Lindenberg Mountain Timber Sale is sold, and will harvest approximately 126 acres of forest in the roadless area. The Dakota Timber Sale harvested approximately 50 acres of forest in the roadless area. South Central Timber Sale is presently harvesting 37 acres. Several other small sales will affect portions of the roadless area with timber harvest and temporary roads. These sales will extend the existing road system from adjacent developed areas north of the 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:** There are no known mining claims in this area. Information from the U.S. Bureau of Mines indicates the Duncan Canal/Zarembo Island mineral tract has a moderate to high mineral development potential for barite, zinc, lead, and silver. The roadless area contains an estimated 1,620 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 corridors cross the roadless area. A potential powerline corridor follows the roads across the Lindenberg Peninsula just north of the area. Sales from the South Lindenberg Timber Sale(s) EIS will extend the existing road system, from the adjacent developed area on the north, into the northern portion of the roadless area.

**(9) Water Availability Uses:** There are no recreation cabins or other facilities located in this roadless area. However, there are private residences adjacent to the roadless area whose domestic water supply comes from streams that begin within the area. No existing or planned hydroelectric or domestic water projects are in the area.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas. The area has not been identified for any other scientific value.

**(11) Land Use Authorizations:** There is one special use authorization in this area for crab pot storage near Duncan Canal.

**(12) Land Status:** All land within the roadless area is part of the National Forest System.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** The area is primarily used for recreation by residents of Petersburg and Kupreanof. There is also some concern over the effects that roads would have on subsistence.

**(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 Green Rocks Roadless Area. In 2001, HR 2908 proposed that the roadless area be managed as a LUD II area in an unroaded condition.

**(c) Public Input During Forest Plan Revisions and Appeals:** In 1996, the Southeast Alaska Conservation Council recommended managing the area to preserve its integrity. They felt that the area merited special protection for its outstanding wildlife, fish, hunting, subsistence, recreation, and tourism values. The Narrows Conservation Council felt that the area should be protected. Others, including timber industry organizations, felt timber harvest should be allowed in this area.

Some comments suggested managing the area as wilderness and others as an old-growth reserve. One commenter wanted the area managed as a Developed Recreation LUD while another wanted the existing developed recreation facilities maintained before new facilities were added. Several comments wanted the Forest Service to provide the strongest possible protection for the area. There were also general comments on Kupreanof Island. Some commenters wanted all unroaded areas developed and some wanted all unroaded areas protected. Some favored designating all unroaded lands as wilderness and some wanted them managed as roadless areas and for remote recreation.

**(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. Others opposed blanket protection of all roadless areas.

**(e) Public Input Expressed for Project-level EISs and Other Input:** Public comments were received on the South Lindenberg Timber Sale(s) EIS and on the Kupreanof Island Analysis. In response to the South Lindenberg project, the Narrows Conservation Council and the Southeast Alaska Conservation Council felt that roads would harm Colorado Creek, an important fish resource. The City of Kupreanof stated that new roads would be contrary to their goal of maintaining a roadless community. Others commented that roads and timber harvest would be bad for wildlife, subsistence, and/or recreation. Owners

of adjacent land were concerned that roads would adversely affect the drinking water supply for homes they plan to build on their property, as well as disturb the wilderness-like setting. Some comments support the use of these area for timber harvest. Comments on the Kupreanof Island Analysis ranged from favoring protecting the area from logging and road building to increasing timber harvest.

**(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 that the remaining unlogged portions of the Lindenberg Peninsula of Kupreanof Island be designated LUD II to safeguard the area's valuable fish and wildlife habitat. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 217 for permanent protection as LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** Green Rocks Roadless Area is separated from the Woewodski Island, Crystal, and Castle Roadless Areas by saltwater. It is separated from the Lindenberg Roadless Area to the north by a roaded area.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 125 | 130 |
| Petersburg (Pop. 3,224) | 10 | 10 |
| Wrangell (Pop. 2,308) | 30 | 35 |
| Ketchikan (Pop. 14,070) | 95 | 115 |

Petersburg and Wrangell are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Green Rocks Roadless Area is located at the southern tip of the Lindenberg Peninsula of Kupreanof Island, between Wrangell Narrows and Duncan Canal. The area borders private land with residential homes to the northeast and Beecher Pass State Marine Park, which is undeveloped, to the south. The area is comprised of one major drainage and several smaller ones. The eastern portion is gently rolling, with muskegs. In the western portion, gently rolling landscapes rise to timbered hillsides up to 2,600 feet. The landform drops steeply to Duncan Canal on the west side of the roadless area. There is one sizable stream in the area.

Most of area appears natural, but the area is heavily influenced by developments and activities in the adjacent areas. The area has high natural integrity and apparent naturalness. The opportunity for solitude is moderate and the opportunity for primitive recreation is moderate.

Approximately 4 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The area does not have any other unique or significant features.

The roadless area includes about 2,377 acres of high-volume, old-growth forest. Of these acres, 357 are mapped as high-volume, coarse-canopy old growth.

The Green Rocks Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 1 percent of the province. It is one 12 of inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The Green Rocks Roadless Area lies within two ecological sections; it represents 0.5 percent of the Inside Passage Fjordlands Ecological Section and less than 0.1 percent of the Kupreanof Lowlands 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, while 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 majority (94 percent) of the roadless area is in the Wrangell Narrows Metasediments Ecological Subsection; this portion of the roadless area represents 3 percent of the entire ecological subsection, which is protected by existing wilderness (11 percent) and other non-development LUDs (18 percent). Six percent of the roadless area is in the Duncan Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents 0.4 percent of the entire ecological subsection, 5 percent of which is in existing wilderness and is well represented by other existing non-development LUDs (35 percent).

The Green Rocks 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 area in an unroaded condition, and some local support for designating the area as wilderness. Designation would create a small wilderness with few significant values or features. The area has a timber sale under contract within it. 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 Green Rocks Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 90 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 10 percent. The land in the development LUDs provides an estimated 337 acres that are suitable for timber production (less than 1 percent of the suitable acres on the Petersburg Ranger District). Approximately 58 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains an estimated 1,620 acres of undiscovered locatable mineral resources; all of the acres are considered to have low potential for development. The timber sales, 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.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, mineral, and special use programs would continue similar to current conditions. No timber harvest would be allowed. The values associated with the natural settings of the roadless area would receive 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 recreation, minerals, and special uses 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 receive long-term protection if designated wilderness.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 217 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 11,059 |
| 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 | 9,968 | 9,968 | 9,968 | 9,968 | 9,968 | | 9,968 | |
| Semi-remote Recreation | | | | | | | | |
| Recommended LUD II | | | | | | 11,059 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 499 | 499 | 499 | 499 | 499 | | 499 | |
| Modified Landscape | 100 | 100 | 100 | 100 | 100 | | 100 | |
| Timber Production | 492 | 492 | 492 | 492 | 492 | | 492 | |
| **TOTAL** | **11,059** | **11,059** | **11,059** | **11,059** | **11,059** | **11,059** | **11,059** | **11,059** |
| **Suitable Timber Lands** | 337 | 337 | 337 | 337 | 337 | 0 | 337 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Woewodski (218)

**ACRES (NFS):** 10,647

**BIOGEOGRAPHIC PROVINCE:** Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Kupreanof Lowlands

**2003 WILDERNESS ATTRIBUTE RATING:** 21

### I. Overview and Description

**(1) Location and Access:** This roadless area covers essentially all of Woewodski Island, which lies across Wrangell Narrows (one-quarter mile) from Mitkof Island. The roadless area also includes Butterworth Island, which lies just offshore across Whiskey Pass on the west side, and several small islets. Kupreanof Island lies to the west and north. Woewodski Island is approximately 15 air miles from the City of Petersburg, served by the Alaska Marine Highway and daily jet service. To the west is Duncan Canal, to the north is Beecher Pass and to the east is Wrangell Narrows. Sumner Strait lies to the south. Floatplanes can access Harvey Lake, where there is a public recreation cabin. There are no sites suitable for landing wheeled aircraft. Land access is by foot or helicopter.

**(2) History:** The area lies within the traditional territory of the Stikine Tlingit. Identified historic and prehistoric period site types include cabins, fur farms, mining sites, culturally modified trees and fish traps. Archaeological shoreline surveys would likely verify the presence of prehistoric period villages and camps. The area is unique in its extent of mineral wealth; minerals include gold and its associated minerals. Various companies have held rights to the island's mineral wealth since the early 1900s. Several old and current mines exist in the area. There is one private residence on a patented mining claim near the Harvey Lake trailhead. Some small areas along the shoreline have been beach-logged.

**(3) Geography and Topography:** The Woewodski Roadless Area is an island comprised of four minor drainages, totaling 10,371 acres. The area also includes Butterworth Island to the southwest of Woewodski Island and several small islets that make up 276 acres (one of which is over 50 acres). The northeast side of Woewodski Island consists of flat muskegs rising to spruce-hemlock forested hillsides up to an elevation of 1,100 feet. Along the west side, forested slopes rise from saltwater to 500 feet in elevation. There are no sizable streams on the island, however lakes in the area include Harvey Lake near the western shoreline and the much smaller Harry's Lake to the south. Freshwater lakes total about 166 acres. The area contains 32 miles of saltwater shoreline. There are no ice or snow, alpine, or rock features mapped in this area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province. The area is generally characterized by rolling, subdued topography and extensive muskeg areas. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The Woewodski Roadless Area is contained entirely within the Kupreanof Lowlands Ecological Section (M247G), Duncan Canal Till Lowlands Ecological Subsection (see table below). The Duncan Canal Till Lowlands Ecological Subsection is characterized by low relief, high precipitation, and depositional soils which have produced an abundance of wetlands on poorly drained sites. Productive forests are limited to slopes and riparian areas with mineral soil (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kupreanof Lowlands | Duncan Canal Till Lowlands | 100% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from forested wetlands to open muskeg.

**(c) Vegetation:** Approximately 188 acres of muskeg are mapped for the area in the low-lying, interior portions of the island, however due to their small size and association with forested sites, accurate acreage estimates are difficult. Sitka spruce/western hemlock old growth is concentrated on the steep landform on the northern end of the island. Alaska yellow-cedar and redcedar occur as minor components in the Sitka spruce/western hemlock old-growth forest and as well distributed stand components in the muskeg/forested wetland mosaic. The island has been used as a local source for spruce trolling poles and redcedar cabin logs.

There are approximately 10,181 acres mapped as forest land of which 5,783 acres or 57 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 1,414 acres or 24 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 171 acres of high-volume, coarse-canopy old growth. There are approximately 57 acres of second-growth forest where beach logging has occurred in the past.

**(d) Fish Resources:** Species present in the roadless area include pink and coho salmon and cutthroat trout. There are two Alaska Department of Fish and Game (ADF&G) numbered salmon producing streams. Harvey Creek is the more important of the two streams, producing medium-sized runs of coho salmon. Harvey Lake is a popular fishing area for cutthroat trout.

**(e) Wildlife Resources:** Black bear, moose, wolves and Sitka black-tailed deer range over the island. Mink, river otters, beaver, marten, ermine, red squirrel, porcupine, mice, shrew, and voles are well distributed over the area. There are occasional sightings of fisher and wolverine but they are at the edge of their range and are considered incidental species. The northern flying squirrel has been migrating to nearby islands from Mitkof Island, and is likely to be found on Woewodski Island.

Bald eagles, northern goshawks, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owl, saw-whet owls, and pigmy owls all are likely to occur on Woewodski Island. Bats are present during the summer months and occasionally over winter in man-made structures.

Numerous duck and goose species, sandhill cranes, trumpeter swans, marbled murrelets, and great blue herons all occur in and around the area both during migration and, in some cases, during nesting season. Spruce grouse and blue grouse are known to occur on the island.

Red-throated, Pacific, and common loon are all likely to occur on the island. Several plover, yellowlegs, and sandpiper species occur, mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are known on nearby Mitkof Island, and probably occur on Woewodski Island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird,

rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Amphibians likely to occur on the island are the rough-skinned newts and the western toad. These species are found primarily in lacustrine, palustrine, hemlock/spruce forests and muskeg bog ecosystems. The western toad is also found in clearcuts.

Marine mammals known to inhabit the waters surrounding Woewodski Island are the Pacific white-sided dolphin, killer whale, harbor porpoise, Dall's porpoise, Steller sea lion and harbor seal.

**(5) Management Direction and Current Uses:** The roadless area was allocated to three Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These three LUDs are Modified Landscape, Scenic Viewshed, and Semi-remote Recreation.

| LUD | Acres |
|---|---|
| Modified Landscape | 1,273 |
| Scenic Viewshed | 9,108 |
| Semi-remote Recreation | 265 |

Approximately 98 percent of the roadless area was allocated to a development LUD (Modified Landscape, Scenic Viewshed). Most of Woewodski Island, approximately 86 percent of the roadless area, was allocated to the Scenic Viewshed LUD. Areas that are less visible from saltwater on Woewodski Island were allocated to the Modified Landscape LUD, which account for approximately 12 percent of the roadless area.

Approximately 2 percent of the roadless area was allocated to a non-development LUD. The only non-development LUD in this area is the Semi-remote Recreation LUD, located on all of Butterworth Island and other small islands in the area.

In the late 1970s and early 1980s, the Woewodski Timber Sale was being planned to harvest approximately 15 million board feet of timber from this area. It was scheduled for sale in 1990, but was not offered due to a decision to defer it until after the decision for the Forest Plan was signed. This area is on the ten-year timber sale schedule and inventory for the environmental analysis for timber harvest and other activities is expected to begin in 2003.

Recreation uses include deer and waterfowl hunting, trout fishing, boating, hiking, swimming, and recreation cabin use. There is one public recreation cabin on Harvey Lake, and one near saltwater at the west end of Beecher Pass. Forest Service Recreation Trail #488 connects Harvey Lake to Duncan Canal. There was one outfitter/guide permit issued in 2000 with 70 service-days of use categorized as remote setting nature tours. Subsistence use of the area is believed to be minor. There is one private residence on a patented mining claim near the Harvey Lake trailhead.

Several old and current mines exist in the area. Woewodski Island was the site of extensive mining in the 1930s, but only small amounts of gold were found before the vein was lost. Mining claims have covered about 90 percent of the island.

**(6) Appearance (Apparent Naturalness):** The island generally appears unmodified, with exceptions being the public recreation cabins, a trail, and the two private residences. On the southeast end of the island, areas of blown-down timber are visible from Wrangell Narrows. Limited beach logging is visible, but not dominant from a few saltwater locations. The results of the mineral exploration are visible in many places on the island, such as cleared helicopter landing sites, core drill sites, and brushing for mining claims.

**(7) Surroundings (External Influences):** The area is within close range of the Petersburg and Kupreanof communities. Numerous recreation residences are in the Beecher Pass area. In 1980, the State of Alaska sold numerous parcels of land through the land lottery program. Many of the land owners have built permanent, year-round residences on their properties. Alaska Marine Highway ferries and a large volume of commercial and recreational boat traffic pass within one-quarter mile of the island on its east side.

**(8) Attractions and Features of Special Interest:** The area contains five inventoried recreation places, which cover 2,986 acres, or 28 percent of the roadless area. The Harvey Lake Trail and cabin, and the Beecher Pass cabin, with their proximity to the city of Petersburg, provide the greatest attraction to the recreating public for this roadless area. The scenery of the area is typical of much of the lowlands of Southeast Alaska.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** There have been no changes in the boundaries since 1989 except where the small areas of old beach logging has been added back into the roadless area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is unmodified except for the existing recreation cabins, two residences, a trail located at the northern end of the island, impacts from minerals exploration, and limited old beach-logging. The natural integrity is high. The roadless area includes all of Woewodski and Butterworth Islands, and several small islets. It does not include approximately 39 acres of private land in the northwest portion of Woewodski Island.

**(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. Low-flying airplanes traveling to and from Petersburg; the ferry; commercial fishermen and barges; and recreational boaters may at times pass by the area and be observed by people in this roadless area. Present recreation use levels are low except around the public recreation cabins, Harvey Lake, and the trail to the lake. The lake is popular with fishermen. Generally, a person camping or traveling inland is unlikely to see others, except on the trail or near the lake. At the Harvey Lake cabin, the character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the community of Petersburg in less than an hour and from Wrangell in approximately 2 hours. In July and August, fishing for coho salmon takes place around the public recreation cabins along Duncan Canal.

Travel inland is less challenging than in many roadless areas in Southeast Alaska. The trail provides access to the lake. Other areas are relatively flat and fairly easy to cross. 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) | 6,279 | 59% |
| Semi-Primitive Motorized (SPM) | 2,518 | 24% |
| Roaded Natural (RN) | 1,850 | 17% |

The area contains five inventoried recreation places, which cover 2,986 acres, or 28 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| SPNM | 0 | 0 |
| SPM | 2 | 1,901 |
| RN | 3 | 1,085 |

There are two public recreation cabins and two residences in the area. There is also a special use permit for a private cabin along the north shore. A developed trail leads from Duncan Canal to Harvey 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 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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Woewodski Roadless Area was given a rating of 22 out of 28 possible points. The rating was re-evaluated in for this updated version of the Analysis of the Management Situation. Based on this re-evaluation, the area was given a rating of 21. This rating reflects the relatively small size of the roadless area and the effects of the ongoing activities in and near the area.

**(4) Ecologic and Geologic Values:** The roadless area is relatively small. It includes nearly the entire island but it is separated from other roadless areas by saltwater, and by developed areas in some places.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCU 448 which encompasses the entire roadless area, as a primary sportfish producer but as a secondary salmon producer (ADF&G, 1998). The boundary of VCU 448 is not restricted to this roadless area and includes streams on Mitkof Island. There are two ADF&G numbered salmon producing streams. Harvey Creek is the more important of the two streams, producing medium-sized runs of coho and pink salmon. A 1979 study, conducted by the ADF&G, estimated there were 669 cutthroat trout present in Harvey Lake at that time.

**(b) Wildlife Resources:** Woewodski Island is considered a "stepping stone" for inter-island migrations between Mitkof Island and Kupreanof Island for the animal migration that is occurring from the Stikine River. Many species currently on Kupreanof are thought to have spread via this route due to the narrow saltwater passage between both Woewodski and Mitkof Islands and Woewodski and Kupreanof Islands. This island was considered for a medium old-growth habitat reserve but did not meet the size criteria. Many Petersburg residents go hunting on this island and moose hunters have been successful here. There have been unconfirmed sightings of elk, a non-native species. Elk are strong swimmers and it is expected that they crossed over from Zarembo Island. ADF&G does not want to manage for elk on this island. Numerous duck and goose species, sandhill cranes, trumpeter swans, marbled murrelets, and great blue herons all occur in and around the area both during migration and, in some cases, during nesting season. Spruce grouse and blue grouse are known to occur on the island.

**(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, 12 sensitive plant species are known or suspected to occur in the Petersburg Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are no known karst or cave resources in this roadless area. Woewodski Island is part of the Duncan Canal/Zarembo Island mineral tract, which has a moderate to high mineral development potential for barite, zinc, lead, and silver. Mining claims cover approximately 90 percent of the island.

**(5) Scientific and Educational Values:** No unique scientific or educational values are known to exist in this area.

**(6) Scenic Values:** The island generally appears unmodified from the surrounding travel routes and recreation sites on the island. Modified areas include the recreation cabins, trail and two private residences. On the southeast end of the island, areas of blown-down timber are visible from Wrangell Narrows, and old beach-logging is visible in a few areas. Overall, the natural appearance dominates the landscape.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Wrangell Narrows, a part of the Alaska Marine Highway and a tour ship route; Duncan Canal, a saltwater use area and small boat route; Sumner Strait, a tour ship route; Beecher Pass and Whiskey Pass, small boat routes; Beecher Pass Marine Park; Beecher Pass and Harvey Lake public recreation cabins; and the Harvey Lake hiking trail #488.

One percent of this roadless area is inventoried Variety Class A (possessing landscape diversity that is unique for the character type). Approximately 91 percent is inventoried Variety Class B (possessing landscape diversity that is common for the character type) and 5 percent is inventoried Variety Class C (possessing as low degree of landscape diversity). Three percent of the area was not inventoried.

The majority of this area, 93 percent, is in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. One percent of the area appears to be untouched by human activity (EVC Type II). Two percent of this roadless area is EVC Type III, where changes in the landscape are seen by the average forest visitor, but the natural appearance of the landscape remains dominant. Approximately one 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. Three percent of the area was not inventoried.

**(7) Social, Cultural, and Historical Values:** The area lies within the traditional territory of the Stikine Tlingit. Identified historic and prehistoric period site types include cabins, fur farms, mining sites, culturally modified trees and fish traps. Archaeological shoreline surveys would likely verify the presence of prehistoric period villages and camps. The area is unique in its extent of mineral wealth; minerals include gold and its associated minerals. Various companies have held rights to the island's mineral wealth since the early 1900s. Several old and current mines exist in the area. There has been a minor amount of timber harvest along the shore. The roadless area receives light subsistence use; it was not listed in the top three categories for high community fish and wildlife values but is listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998). There are two recreation cabins and a developed trail that provide recreation opportunities on the island.

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The roadless area includes all of Woewodski and Butterworth Islands, except for approximately 39 acres of private land in the northwest portion of Woewodski Island. The area is surrounded by saltwater and is easily defined, except for the private land. Most of the area is allocated to development LUDs. The area has high potential for mining development. Ninety percent of the island has mining claims, which would conflict with wilderness management. Feasibility of management in a roadless condition is moderate. Roadless Area 215 lies to the west, across Duncan Canal. Roadless Area 224 lies to the east, across Wrangell Narrows. Roadless Area 217 lies to the north across Beecher Pass and is separated by state and private land on the south end of the Lindenberg Peninsula. Some residents of that area have voiced strong opposition to development on Woewodski Island. Management in an unroaded condition would be consistent with their objectives. Other residents support roads, which would provide the infrastructure for minerals development.

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

**(1) Recreation, Including Tourism Potential:** There is potential for additional outfitter and guide use, developed trails, and cabins or shelters. Tourism has been increasing in Southeast Alaska and is expected to continue to grow. The area's proximity to Petersburg makes its recreation potential higher than for many other roadless areas on the Petersburg Ranger District. Small cruise ship companies use the Harvey Lake trail for their clients. This large group use would conflict with wilderness designation.

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

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

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

**(5) Timber Resources:** There are approximately 5,783 acres inventoried as productive old-growth forest and 57 acres mapped as second growth due to harvest in the roadless area. Approximately 5,375 acres of these areas 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), 2,346 acres or, 22 percent of this roadless area are estimated to be suitable for timber production. Approximately 569 of the suitable acres are mapped as high-volume old growth; of these acres, 88 are mapped as high-volume, coarse-canopy old growth.

A site for transferring logs to saltwater may be necessary to access the island's interior. Timber development could occur in conjunction with mining activities.

**(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:** Woewodski Island was the site of extensive mining in the 1930s, but only small amounts of gold were found. The area has an abundant supply of minerals, and mineral exploration activity has increased in the last few years. Information from the U.S. Bureau of Mines indicates the Duncan Canal/Zarembo Island mineral tract has a moderate to high mineral development potential for barite, zinc, lead, and silver. Mining claims cover approximately 90 percent of the island.

The roadless area contains 5,681 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, the roadless area contains an estimated 10,647 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 7,294 of these acres are considered to have moderate potential for development.

**(8) Transportation and Utilities:** No existing or proposed transportation or utility corridors cross the roadless area. The area is due east and adjacent to the Alaska Marine Highway.

**(9) Water Availability and Use:** Two private residences and two public recreation cabins create a domestic water demand within this roadless area. There are no existing or planned hydroelectric or domestic water projects.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas, and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** The U. S. Coast Guard is authorized to maintain aids to navigation at Beecher Pass, Butterworth Island, and Point Lockwood. A private individual is authorized to store crabpots at Beecher Pass and a private recreation cabin is authorized at Beecher Pass.

**(12) Land Status:** There is no other land ownership within the roadless area other than National Forest System lands.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** The area is primarily used for recreational purposes, with Petersburg residents and those from the Beecher Pass homesites making use of the Harvey Lake Trail and recreation cabins. Some residents of Beecher Pass have voiced strong opposition to development on the island. Some residents of Petersburg would like to see Woewodski developed to provide an infrastructure for minerals development.

**(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 Woewodski Roadless Area. In 2001, HR 2908 proposed that the roadless area be designated as part of the West Duncan-Castle River Wilderness.

**(c) Public Input During Forest Plan Revisions and Appeals:** No specific comments were received on this roadless area. Some comments concerning roadless areas in general recommended that all roadless areas on the Forest be protected. Others felt that roadless areas should be developed.

**(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 and Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development, while others wanted to keep the same level of development.

**(e) Public Input Expressed for Project-level EISs and Other Input:** During the planning for the Woewodski Timber Sale in the late 1980s, strong opposition developed from residents in the Beecher Pass area. Residents favored managing the area for recreation.

**(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 Woewodski roadless area as the second highest priority for protection in the Stikine Area. 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 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 Kupreanof recommends Woewodski for designation as wilderness.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 218 for permanent protection as wilderness. SEACC recommended that the Woewodski Roadless Area be designated as wilderness to protect valuable fish and wildlife habitat.

Some individuals recommended this area for permanent protection as wilderness.

**(2) Nearby Roadless and Wilderness Areas and Uses:** Woewodski Island is separated by saltwater, and by state and private land in places, from the Castle, Crystal, and Green Rocks Roadless Areas. The Petersburg Creek-Duncan Salt Chuck Wilderness lies 20 miles north of this 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) | 130 | 135 |
| Petersburg (Pop. 3,224) | 15 | 15 |
| Wrangell (Pop. 2,308) | 25 | 25 |
| Ketchikan (Pop. 14,070) | 90 | 105 |

Petersburg and Wrangell are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** This Woewodski Roadless Area covers essentially all of Woewodski Island, which lies across Wrangell Narrows (one-quarter mile) from Mitkof Island. The roadless area also includes Butterworth Island, which lies just offshore across Whiskey Pass on the west side, and several small islets. To the west is Duncan Canal, to the north is Beecher Pass and to the east is Wrangell Narrows. Sumner Strait lies to the south. To the northeast there are flat muskegs rising to timbered hillsides of 1,100 feet. To the southwest, landforms rise gradually to 500 feet. There are no sizeable streams on the islands. Dominant waterforms include Harvey Lake in the northwest portion of the Woewodski Island.

The area is mostly unmodified and natural appearing. The area has very high natural integrity and apparent naturalness. The opportunity for solitude is moderate and the opportunity for primitive recreation is high.

Approximately 1 percent of the landscape in the roadless area is considered distinctive for the character type from a scenery standpoint. Ninety percent of the island has mining claims and is reflective of the high degree of mineralization of the island. The island's proximity to Petersburg make it a popular destination for recreation.

The roadless area includes about 1,414 acres of high-volume, old-growth forest. Of these acres, 171 are mapped as high-volume, coarse-canopy old growth.

The Woewodski Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 1 percent of the province. It is one 12 of inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The Woewodski 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 Woewodski Roadless Area lies completely within the Duncan Canal Till Lowlands Ecological Subsection and represents 4 percent of the ecological subsection. Approximately 5 percent of the Duncan Canal Till Lowlands Ecological Subsection is in existing wilderness and 35 percent is protected in other existing non-development LUDs.

The Woewodski 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 five other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the area in an unroaded condition, and very little support for designation of the area for wilderness. Designation would create a small wilderness with relatively high recreation uses, and an area that is actively explored for minerals to the degree that about 90 percent of the area is covered by mining claims. 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 Woewodski Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 is implemented. Approximately 2 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 98 percent. The land in the development LUDs provides an estimated 2,346 acres that are suitable for timber production (1 percent of the suitable acres on the Petersburg Ranger District). Approximately 88 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains 5,681 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. In addition, the roadless area contains an estimated 10,647 acres of undiscovered locatable mineral resources; 7,294 of the acres are considered to have moderate potential for development. The timber sales, 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.

Under Alternatives 6, 7, or 8, the entire roadless area would be converted to Recommended Wilderness LUD. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses 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 receive long-term protection if designated wilderness.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 218 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | 10,647 | 10,647 | 10,647 |
| 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 | 265 | 265 | 265 | 265 | 265 | | | |
| Recommended LUD II | | | | | | | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 9,108 | 9,108 | 9,108 | 9,108 | 9,108 | | | |
| Modified Landscape | 1,273 | 1,273 | 1,273 | 1,273 | 1,273 | | | |
| Timber Production | | | | | | | | |
| **TOTAL** | **10,647** | **10,647** | **10,647** | **10,647** | **10,647** | **10,647** | **10,647** | **10,647** |
| Suitable Timber Lands | 2,346 | 2,346 | 2,346 | 2,346 | 2,346 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** East Mitkof (220)

**ACRES (NFS):** 9,444

**BIOGEOGRAPHIC PROVINCE:** Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 15

### I. Overview and Description

**(1) Location and Access:** The East Mitkof Roadless Area is located on the eastern side of Mitkof Island, near the southern end of Frederick Sound. The area is approximately 10 air miles or 15 road miles southeast of the city of Petersburg, which is served by the Alaska Marine Highway and daily jet service. Forest roads that connect the area with the city of Petersburg, and areas developed for timber management, make up the irregularly-shaped western, southern, and northern boundaries. The eastern boundary is defined by the shoreline along Frederick Sound. The roads and Frederick Sound provide access to portions of this roadless area. Trails in the Three Lakes area provide good access to that portion of the roadless area. There are no sites suitable for landing wheeled aircraft or floatplanes in the roadless area. Access to the interior is by foot or by helicopter.

**(2) History:** The area is in the traditional territory of the Stikine Tlingit. An abandoned village site and petroglyphs are reported in the vicinity of Ideal Cove. A saltery and cold storage plant was established in Ideal Cove beginning in 1901 and some remnants of these cabins remain. There is a Civilian Conservation Corps shelter, built around 1938, at Shelter Lake.

**(3) Geography and Topography:** The area encompasses the mostly gradual slopes of the lower Bear Creek drainage. The terrain north of Bear Creek is generally flat and predominantly muskeg. Narrow bands of forest vegetation define the drainage patterns. To the south the terrain exhibits some relief, but for the most part consists of rolling hills of spruce-hemlock forest. The southern portion includes Sand, Hill, and Crane lakes. Elevations range from sea level to just over 1,000 feet. The area contains approximately 10 miles of saltwater shoreline and 104 acres of freshwater lakes. The majority of the area is forested with no alpine or rock habitat mapped in this area. There are approximately 29 acres of islands off the coast.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province. The area is generally characterized by rolling, subdued topography and extensive muskeg areas. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The East Mitkof Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), Wrangell Narrows Metasediments Ecological Subsection (see table below). Mountains of sedimentary origin have been extensively reshaped by glaciers and glacial deposition. Slopes are forested with hemlock, spruce, and cedar while lodgepole pine and mixed-conifer stands are found in poorly drained soils. Wetlands are common in low relief, depositional areas. Thick peat deposits have accumulated in some sites with poor drainage (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Wrangell Narrows Metasediments | 100% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock and glacial drift. In general, well- or moderately well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

**(c) Vegetation:** Vegetation of the lower, poorly-drained portions of this roadless area consists of large muskegs vegetated primarily with scattered shore pine and small, slow-growing cedar. Approximately 1,837 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. The better-drained hills support more typical forest stands of spruce-hemlock and Alaska yellow-cedar.

There are approximately 7,458 acres mapped as forest land, of which 3,219 acres or 43 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 636 acres or 20 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 377 acres of high-volume, coarse-canopy old growth. There are approximately 411 acres of second-growth forest where beach logging has occurred in the past.

**(d) Fish Resources:** There are four Alaska Department of Fish and Game (ADF&G) numbered streams in this roadless area. These streams support pink, chum, and coho salmon, as well as steelhead, cutthroat trout, and Dolly Varden char. Nearby marine waters support significant populations of Tanner, Dungeness, and king crab.

**(e) Wildlife Resources:** A small population of Sitka black-tailed deer, wolves, and black bear range over the roadless area. There is a small moose population in the area. Elk have been sighted on Mitkof Island. Bald eagles, northern goshawk, osprey, and red-tailed hawks may be found in this area. Mountain lions have recently been reported on the island, one near the roadless area. They are probably migrating into Southeast Alaska from Canada via the river corridors, and are considered incidental species at the edge of their range. The brown bear is another incidental species that is rarely seen on Mitkof Island.

Mink, river otters, beaver, marten, ermine, red squirrel, northern flying squirrel, porcupine, mice, shrew, and voles are well distributed over Mitkof Island. There are occasional sightings of fisher and wolverine but they are considered an incidental species at the edge of their range. Bats are present during the summer months and occasionally over winter in man-made structures.

Numerous duck and goose species, sandhill cranes, trumpeter swans, marbled murrelets, great blue herons, spruce grouse, blue grouse, and ptarmigan may be found on Mitkof Island. Other bird species include sharp-shinned hawks, American kestrel, great horned owls, western screech owl, saw-whet owls, and pigmy owls. The kestrel is found only on the southern end of the island near the Stikine River.

Red-throated, Pacific, and common loons all occur on the Mitkof Island. Several plover, yellowlegs, and sandpiper species occur mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the Mitkof Island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Amphibians known to occur on Mitkof Island include the rough-skinned newt, the western toad, and spotted frogs. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests,

and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts. Spotted frogs are found primarily in lacustrine, palustrine ecosystems and were probably introduced by local residents who brought them back from the Stikine River as pets.

Sea mammals known to inhabit the waters surrounding Mitkof Island are the Pacific white-sided dolphin, killer whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and the harbor seal.

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

| LUD | Acres |
|---|---|
| Timber Production | 2,737 |
| Modified Landscape | 1,239 |
| Old-growth Habitat | 3,148 |
| Semi-remote Recreation | 2,320 |

Approximately 42 percent of the roadless area was allocated to LUDs that allow roads and timber harvest (Timber Production, Modified Landscape). The Timber Production LUD was assigned to approximately 29 percent of the roadless area. Approximately 13 percent of the roadless area was allocated to the Modified Landscape LUD.

Most of the roadless area, approximately 58 percent, was allocated to non-development LUDs (Old-growth Habitat, Semi-remote Recreation). Approximately 33 percent of the roadless area, located in the Bear Creek, or Big Creek area, was allocated to the Old-growth Habitat LUD. Approximately 25 percent of the roadless area was allocated to the Semi-remote Recreation LUD.

Recreation uses of the area include black bear, moose, deer, waterfowl, and grouse hunting; coho salmon, pink salmon, steelhead, and trout fishing; sea kayaking; boating; swimming; picnicking; ice skating; snowmobiling; cross-country skiing; hiking; camping; and gathering forest products. Due to its proximity to Petersburg and easy access, the East Mitkof Roadless Area receives relatively heavy recreational use. Much of this use is centered around the Three Lakes area, which has a system of interconnecting plank and boardwalk trails. Such an interconnecting trail system is unique for Southeast Alaska. The trails are short and gentle, adding to their popularity. Each of the lakes has a boat for general public use, and there is an old Civilian Conservation Corps shelter at Shelter Lake. Wintertime use of the area, mainly snowmobile use, is growing. Cross-country ski use is also growing in popularity, and is related to accessibility of the roads in winter to vehicles. The area around Ideal Cove receives a moderate amount of marine recreation use. One outfitter/guide permit was issued for the roadless area in 2000 (4 service days for camping and 10 service days for nature tours). The roads which border three sides of the area provide the access for a variety of uses in the area. There is some subsistence use in the area, primarily by the residents of the Petersburg area. An area of about 910 acres around Ideal Cove has been conveyed to the State of Alaska.

**(6) Appearance (Apparent Naturalness):** The majority of the area appears unmodified. Exceptions are the trails and shelter, and areas adjacent to timber harvest activity and roads.

**(7) Surroundings (External Influences):** State and National Forest System lands are adjacent to the roadless area. Road use and timber management activities are most noticeable from those portions of the area nearest the roads. Commercial and recreational boat traffic may be seen and heard along the northeastern edge of the roadless area bordering Frederick Sound. Low-flying aircraft may occasionally be noticed by people in the area.

**(8) Attractions and Features of Special Interest:** Being accessible by road from a population center (Petersburg), this roadless area is a popular recreation area. The main attractions of the area are the complex of freshwater lakes and trails, and Ideal Cove. Although Ideal Cove has been conveyed to the State of Alaska, the Forest Service maintains a boardwalk trail from the Three Lakes area to saltwater near the cove. The area contains 7 inventoried recreation places, which cover 5,369 acres, or 57 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. Old timber harvest units along the shore that do not contain roads have been included. Also, the area along the roaded and harvested portions has been more carefully defined, adding to the size of the roadless area. The State lands near Ideal Cove have also been removed. Small areas around the boundaries along developed areas have been excluded between the Draft and Final SEIS to improve manageability of the boundaries in those areas. This has included the removal of the southeastern tip which was nearly pinched off by developed areas.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** Except for the plank trails and minor development at the lakes, the area is unmodified and appears natural, and has maintained its overall integrity. However, adjacent developments, including one of the most heavily traveled roads on Mitkof Island, have negatively affected some of the natural integrity and apparent naturalness of this area. This impact is considered moderate.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a moderate to low opportunity for solitude within the roadless area. Air traffic and marine traffic pass nearby and may be heard and observed by people in this roadless area. The trails and lakes also attract day hikers, lessening the probability of solitude. Vehicle traffic on the roads along the north, west, and south sides of this narrow roadless area can be heard at times. Management activities in the adjacent areas would have a significant impact on the opportunity for solitude when they are occurring. During periods of low use in the area, visitors may feel remote from the sights and sounds of human activity.

There are few opportunities for self-reliance, adventure, and challenging experiences. The area is relatively flat and easily accessed at many points from the extensive road system along the boundaries and trail system in the Three Lakes area.

Overall, recreation use levels are moderate, except along the trail corridor and some easily-accessible locales, where use levels are high. Generally, a person camping or traveling away from the trail corridors is unlikely to see others.

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) | 6,641 | 70% |
| Semi-Primitive Motorized (SPM) | 1,496 | 16% |
| Roaded Natural (RN) | 11 | 0% |
| Roaded Modified (RM) | 2,296 | 14% |

The area contains 7 inventoried recreation places, which cover 5,369 acres, or 57 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| SPNM | 2 | 3,224 |
| SPM | 1 | 1,496 |
| RN | 2 | 11 |
| RM | 5 | 638 |

* Some Rec. Places 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).

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 East Mitkof Roadless Area was given a rating of 16 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. This rating reflects the effects on the area from developments in adjacent areas.

**(4) Ecologic and Geologic Values:** The roadless area is small and narrow. 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) listed VCU 450 along Frederick Sound as both a primary salmon producer and a primary sport fish producer.

Streams in this roadless area support pink, chum, and coho salmon, as well as steelhead, cutthroat trout, and Dolly Varden char. Bear (Big) Creek has an estimated annual peak escapement of 5,500 pink salmon, and also provides habitat for chum and coho salmon; steelhead; and Dolly Varden char. Three other unnamed Class I streams provide habitat for coho and pink salmon; cutthroat trout; and Dolly Varden char. Sand, Hill, and Crane lakes are popular recreational fisheries for cutthroat trout. The nearby marine waters support significant commercial, personal use, and recreational fisheries.

**(b) Wildlife Resources:** The roadless area supports a population of Sitka black-tailed deer, wolves, marten, river otter, northern flying squirrel, and black bear. There is also a small moose population in the area. Elk sightings have occurred on Mitkof Island. Rarely, brown bears are seen on Mitkof Island. Mountain lions have recently been seen on the island near this roadless area. They are probably migrating into Southeast Alaska from Canada along the major river corridors, such as the Stikine. They are considered an incidental species here. Bald eagles, northern goshawk, osprey, and red-tailed hawks may occur in 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, 12 sensitive plant species are known or suspected to occur in the Petersburg 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 unique scientific or educational values identified in this roadless area, although the trail system is well suited for guided educational walks.

**(6) Scenic Values:** Overall, the roadless area has retained its scenic integrity when viewed from Frederick Sound and Dry Bay, major travel routes. Area modifications include the plank trails and minor development at the lakes. The area is bounded on three sides by roads and timber management activities. There are few topographic breaks or other features to define the area. Visual Priority Routes and Use Areas identified by the Forest Plan within or adjacent to the area include: Frederick Sound, a part of the Alaska Marine Highway and a tour ship route; Dry Strait, a marine travel route; Ideal Cove, a saltwater use area; Ideal Cove Hiking Trail #508; and Three Lakes Loop Hiking Trails #600-603.

Twenty percent of the roadless area is inventoried Variety Class B (possessing landscape diversity that is common for the character type). Most of the roadless area, about 78 percent, is inventoried in Variety Class C (possessing a low degree of landscape diversity). Approximately two percent of the area was not inventoried.

Most of the roadless area, 85 percent, is in Existing Visual Condition (EVC) I, where areas appear to be untouched by human activity. About 8 percent of the area is in EVC III, in which the average person notices change to the landscape but it does not attract attention. The natural appearance of the landscape still remains dominant. About 3 percent is in EVC IV, in which changes to the landscape are easily noticed by the average person and may attract some attention. They appear to be disturbances but resemble natural patterns. EVC V accounts for approximately 3 percent, where changes to the landscape are obvious to the average person, and appear to be major disturbances. Two percent of the area was not inventoried.

**(7) Social, Cultural, and Historical Values:** The area is in the traditional territory of the Stikine Tlingit. An abandoned village site and petroglyphs are reported in the vicinity of Ideal Cove. A saltery and cold storage plant was established in Ideal Cove in 1901 and some remnants of these cabins remain. There is a Civilian Conservation Corps shelter, built in 1938, at Shelter Lake. The Three Lakes area and its interconnected trail system is an important recreation area for nearby Petersburg. The area is popular for fishing, and deer and moose hunting. Subsistence uses include hunting, fishing, and berry picking. The area is used for subsistence, primarily by the people from the Petersburg area. VCU 450 along Frederick Sound is listed as having the highest community fish and wildlife values. Both the VCUs in this area (VCUs 450 and 453) are listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** The area is bounded on three sides by roads and timber management activities. Except along the shore, there are few topographic breaks or other features to define the area. Feasibility of management in a wilderness condition is low due to the amount of managed activities adjacent to this relatively narrow strip of roadless area. The level of development of planked trails and the amount of use in the Three Lakes area is also inconsistent with wilderness designation. The land around Ideal Cove is owned by the State, which is now outside the roadless area. Future management of this area is not known. If the state land is developed, the wilderness value of the roadless area may be further reduced.

## 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. Petersburg is a hub for this increase in tourism and is expected to continue to be. The close proximity of the roadless area to Petersburg is likely to result in an increase in tourist interest in the roadless area. There is potential for outfitter and guide permits, winter trails, and for additional summer trails. Potential also exists for additional cabins, shelters, and roaded recreation activities, such as sightseeing and interpretation. In cooperation with the State, Ideal Cove could provide an important trail access to the Stikine-LeConte Wilderness and could be used more extensively by watercraft and other marine-activities.

**(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 approximately 3,219 acres inventoried as productive old-growth forest in the roadless area. Approximately 411 acres are second growth from beach logging in prior years. Of this, approximately 2,263 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), 427 acres (6 percent) of this roadless area are estimated to be suitable for timber production. Approximately 196 of the suitable acres are mapped as high-volume old growth; of these acres, 46 are mapped as high-volume, coarse-canopy old growth.

A road system and/or logging systems capable of harvesting the area would be necessary. Nearby roads could be extended to accomplish some of this.

**(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 area has low minerals potential.

**(8) Transportation and Utilities:** There are no transportation or utility corridors proposed for the roadless area.

**(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 no Research Natural Areas nor has it been identified for any other scientific purpose.

**(11) Land Use Authorizations:** Forest Service records show that one outfitter/guide used this area in 2000 for 10 service days for remote setting nature tours and 4 service days for camping.

**(12) Land Status:** All land within the roadless area is part of the National Forest System. Ideal Cove, an area of about 910 acres on the shore of Frederick Sound, has been conveyed to the State of Alaska.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Portions of the area are traditional and/or popular recreation areas.

**(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 East Mitkof Roadless Area. In 2001, HR 2908 proposed that the roadless area be managed as LUD II in an unroaded condition.

**(c) Public Input During Forest Plan Revisions and Appeals:** There were no direct comments on the roadless area. The Narrows Conservation Council, the Wrangell Resource Council, and others felt that the undeveloped areas on the island should be protected from timber harvest. The Southeast Alaska Conservation Council and the Alaska Rainforest Campaign recommended that the remaining unroaded areas on the island be managed as LUD II. However, timber industry organizations felt that there was no justification for this.

**(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 have been received on project-level NEPA documents. Comments were received on the 1995 Final Mitkof Landscape Design. There were no specific comments on the East Mitkof Roadless Area dealing with the roadless/wilderness issue. There were general comments concerning this issue for Mitkof Island. Some commenters wanted more roads to allow better access and some wanted roadless and unroaded areas to remain unroaded. Some favored timber harvest and some wanted the remaining old growth (and deer habitat) protected.

**(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 that the remaining roadless areas on heavily logged Mitkof Island be designated LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 220 for permanent protection as LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The nearest roadless areas are Crystal and Manzanita. All are within 2 to 4 miles, and are separated by roads and developed areas. The nearest wilderness is the Stikine-LeConte, portions of which are about 1 to 6 miles away, across Frederick Sound and Dry Strait.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 125 | 130 |
| Petersburg (Pop. 3,224) | 10 | 10 |
| Wrangell (Pop. 2,308) | 15 | 15 |
| Ketchikan (Pop. 14,070) | 90 | 115 |

Petersburg is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The East Mitkof Roadless Area is located on the eastern side of Mitkof Island, near the southern end of Frederick Sound. Forest roads that connect the area with the city of Petersburg, and areas developed for timber management, make up the irregularly-shaped western, southern, and northern boundaries. The eastern boundary is defined by the shoreline along Frederick Sound. The area generally slopes to the east in a gentle manner. Terrain in the northern portion is nearly flat. Terrain in the southern portion exhibits some relief, but is only gently rolling. The highest point is just over 1,000 feet in elevation and the lowest point is at sea level.

The area is heavily influenced by developments and activities on adjacent lands. The natural integrity and apparent naturalness is moderate for the area. The opportunity for solitude is low and the opportunity for primitive recreation is moderate.

None of the area is rated as distinctive for the character type from the scenery perspective. There are no known features of ecologic, geologic, scientific, or cultural significance in this roadless area.

The roadless area includes about 636 acres of high-volume, old-growth forest. Of these acres, 377 are mapped as high-volume, coarse-canopy old growth.

The East Mitkof Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 1 percent of the province. It is 1 of 12 inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The East Mitkof Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents 0.5 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 East Mitkof Roadless Area lies completely within the Wrangell Narrows Metasediments Ecological Subsection and represents 3 percent of the ecological subsection. Approximately 11 percent of the Wrangell Narrows Metasediments Ecological Subsection is in existing wilderness and 18 percent is protected in other non-development LUDs.

The East Mitkof 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 3 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for managing the area in an unroaded condition, and very little support for designating the area as wilderness. Designation would create a small wilderness that is heavily influenced by developments and activities on adjacent lands, and that has no wilderness attributes or features of significance. 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 East Mitkof Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 58 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 42 percent. The land in the development LUDs provides an estimated 427 acres that are suitable for timber production (less than 1 percent of the suitable acres on the Petersburg Ranger District). Approximately 46 of the suitable acres are classified as high-volume, coarse-canopy old growth. The timber sales, 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.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. No timber harvest would be allowed. The values associated with the natural settings of the roadless area would receive long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses 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 receive long-term protection if designated wilderness.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 220 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 9,444 |
| 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 | 3,148 | 3,148 | 3,148 | 3,148 | 3,148 | | 3,148 | |
| Semi-remote Recreation | 2,320 | 2,320 | 2,320 | 2,320 | 2,320 | | 2,320 | |
| Recommended LUD II | | | | | | 9,444 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | 1,239 | 1,239 | 1,239 | 1,239 | 1,239 | | 1,239 | |
| Timber Production | 2,737 | 2,737 | 2,737 | 2,737 | 2,737 | | 2,737 | |
| **TOTAL** | **9,444** | **9,444** | **9,444** | **9,444** | **9,444** | **9,444** | **9,444** | **9,444** |
| Suitable Timber Lands | 427 | 427 | 427 | 427 | 427 | 0 | 427 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Manzanita (223)

**ACRES (NFS):** 10,436

**BIOGEOGRAPHIC PROVINCE:** Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 18

### I. Overview and Description

**(1) Location and Access:** This roadless area is located on the southeast portion of Mitkof Island. The area is almost 20 miles southeast of the city of Petersburg. Forest roads, harvest units, the Mitkof Highway, and State-owned land generally make up the irregularly-shaped boundaries. There is a small portion bounded by saltwater on the eastern side. Roads provide access to portions of this roadless area. Petersburg is served by the Alaska Marina Highway and daily jet service. There are no areas suitable for landing airplanes in the roadless area. Access to the interior is by foot or helicopter.

**(2) History:** The area is in the traditional territory of the Stikine Tlingit. No known cultural sites exist in the area. A mild-cure fish plant reportedly operated along the shores of Dry Strait in the early 1900s.

**(3) Geography and Topography:** The area exhibits considerable relief, consisting of a ridge system with drainage systems oriented in all directions. Drainage from this area is mostly high gradient and forms the headwaters for several moderate-sized streams. Slopes are moderate to steep. Elevation ranges from sea level to nearly 2,500 feet. About 7,349 acres in the area are covered by spruce-hemlock forest. This area has about 3 miles of saltwater shoreline. There are no ice or snow, alpine or rock features mapped in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province. The area is generally characterized by rolling, subdued topography and extensive muskeg areas. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The Manzanita Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), Wrangell Narrows Metasediments Ecological Subsection (see table below). Mountains of sedimentary origin have been extensively reshaped by glaciers and glacial deposition. Slopes are forested with hemlock, spruce, and cedar while lodgepole pine and mixed-conifer stands are found in poorly drained soils. Wetlands are common in low relief, depositional areas. Thick peat deposits have accumulated in some sites with poor drainage (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Wrangell Narrows Metasediments | 100% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are very acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg. Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Vegetation of this roadless area primarily consists of spruce-hemlock forests on the mountain sides, and minor amounts of subalpine forest, which includes mountain hemlock, at the higher elevations. 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 9,760 acres mapped as forest land of which 6,037 acres or 62 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 1,985 acres or 33 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 236 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:** This roadless area contains part of the headwaters of Ohmer Creek, a primary producer of pink salmon. The Alaska Department of Fish and Game (ADF&G) Anadromous Waters Catalogue and Atlas (2000) does not show any other fish-bearing streams in this area.

**(e) Wildlife Resources:** A population of Sitka black-tailed deer, moose, wolves, and black bear range over the roadless area. Bald eagles, northern goshawk, osprey, and red-tailed hawks may be found in this area. Mountain lions have recently been reported on the island, one near the roadless area. They are probably migrating into Southeast Alaska from Canada via the river corridors, and are considered incidental species at the edge of their range. Brown bears and elk are rarely seen on Mitkof Island.

Mink, river otters, beaver, marten, ermine, red squirrel, northern flying squirrel, porcupine, mice, shrew, and voles are well distributed over Mitkof Island. There are occasional sightings of fisher and wolverine but they are considered an incidental species at the edge of their range. Bats are present during the summer months and occasionally over winter in man-made structures.

Numerous duck and goose species, sandhill cranes, trumpeter swans, marbled murrelets, great blue herons, spruce grouse, blue grouse, and ptarmigan may be found on Mitkof Island. Other bird species include: sharp-shinned hawks, American kestrel, great horned owls, western screech owl, saw-whet owls, and pigmy owls. The kestrel is found only on the southern end of the island near the Stikine River.

Red-throated, Pacific, and common loons all occur on the Mitkof Island. Several plover, yellowlegs, and sandpiper species occur, mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the Mitkof Island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Amphibians known to occur on Mitkof Island include the rough-skinned newt, the western toad, and spotted frogs. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts. Spotted frogs are found primarily in lacustrine, palustrine ecosystems and were probably introduced by local residents who brought them back from the Stikine River as pets.

Sea mammals known to inhabit the waters surrounding Mitkof Island are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and the harbor seal.

**(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 are Timber Production, Scenic Viewshed, Modified Landscape, and Old-growth Habitat.

| LUD | Acres |
|---|---|
| Timber Production | 5,048 |
| Scenic Viewshed | 1,954 |
| Modified Landscape | 1,801 |
| Old-growth Habitat | 1,633 |

Approximately 84 percent of the roadless area was allocated to a development LUD (Timber Production, Scenic Viewshed, Modified Landscape). Much of the roadless area, approximately 48 percent, was allocated to the Timber Production LUD. Located in the western part of the roadless area around Manzanita Peak, approximately 19 percent of the area was allocated to the Scenic Viewshed LUD. Approximately 17 percent of the roadless area was allocated to the Modified Landscape LUD, located in the western portion of the area.

About 16 percent of the roadless area was allocated to one non-development LUD, Old-growth Habitat. Land in this non-development LUD is located near Dry Strait.

Due to its proximity to Petersburg and accessibility by road, the Manzanita Roadless Area receives day-use by local residents. Most use is concentrated along the outside edges that are accessible by roads. Recreation uses include deer, moose, black bear, waterfowl, and grouse hunting; snowmobiling; cross-country skiing; rock hounding; hiking; camping; and gathering forest products. Some of the use is for subsistence. No outfitter/guide permits were issued for this roadless area in 2000.

**(6) Appearance (Apparent Naturalness):** The majority of the area appears unmodified, except for areas adjacent to roads and areas with timber harvest activity.

**(7) Surroundings (External Influences):** Developments associated with management and public access activities occur on all sides of the roadless area. Noise and sights of vehicles and active timber sales may occur periodically, being greatest near the roads and lessening as one moves away. The Tyee Powerline skirts the western side of the area and is visible from many places within the roadless area. Frequent low-flying aircraft may temporarily distract visitors in the area.

**(8) Attractions and Features of Special Interest:** The proximity to Petersburg by roaded access makes portions of this roadless area attractive for recreation. The prime attractions are hunting, and the system of ridges in the center, which provides views and excellent snow machine travel. The area contains two inventoried recreation places, which cover 68 acres, or less than 1 percent of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** There have been minor additions to the boundaries since 1989. The area along the roaded and harvested portions has been more carefully defined, adding to the size of the roadless area. Several smaller areas were excluded along the boundaries formed by developed areas between the Draft and Final SEIS to improve the manageability in these areas.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is unmodified; however, its overall integrity is not considered pristine. Adjacent management activities have negatively affected the natural integrity of this area. Developments extend into the area in several places, also lessening its natural integrity and apparent naturalness. Harvest units in adjacent areas visible from Sumner Strait also affect the apparent naturalness of the roadless area.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a low to moderate opportunity for solitude and primitive recreation within the area. Air traffic and vehicle traffic pass nearby and may be heard and observed by people in this roadless area. Overall, recreation use levels are low, except along the fringes near road access. Generally, a person camped or traveling

away from the roads is unlikely to encounter other people. Timber harvest or periodic activities in the adjacent areas have a significant impact on the opportunity for solitude when they are occurring.

The steep nature of the landforms and the presence of black bears presents a degree of challenge and the need for woods skills and experience. 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 recreation opportunities primarily in a roaded 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 |
|---|---|---|
| Semi-Primitive Non-Motorized (SPNM) | 3,107 | 30% |
| Semi-Primitive Motorized (SPM) | 287 | 3% |
| Roaded Natural (RN) | 10 | 0% |
| Roaded Modified (RM) | 7,032 | 67% |

The area contains two inventoried recreation places, which cover 68 acres, or less than 1 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| SPNM | 0 | 0 |
| SPM | 0 | 0 |
| RN | 1 | 10 |
| RM | 1 | 58 |

There are no developed recreation opportunities in 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 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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Manzanita Roadless Area was given a rating of 18 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 also given a rating of 18.

**(4) Ecologic and Geologic Values:** The roadless area is small and irregular. It is not connected to any other roadless areas or wilderness. It has no known unique ecologic or geologic values.

**(a) Fish Resources:** A small portion of this roadless area lies along Summer Strait in VCU 452, which was listed by the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) as a primary producer of salmon.

This roadless area contains part of the headwaters of Ohmer Creek, a primary producer of pink salmon. The estimated annual peak escapement is 30,800 pink salmon, and the creek has high coho salmon smolt

capability. The ADF&G Anadromous Waters Catalogue and Atlas (2000) does not show any other fish-bearing streams in the roadless area.

**(b) Wildlife Resources:** A population of Sitka black-tailed deer, wolves, moose, and black bear range over the roadless area. Brown bears are rarely reported on Mitkof Island. Waterfowl are plentiful near the shoreline due to the proximity of the area to the Stikine River delta but no bodies of water are located in the interior. A mountain lion was recently reported on the island, near this roadless area. Mountain lions are probably migrating into Southeast Alaska from Canada along the major river corridors. They are considered an incidental species here.

**(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, 12 sensitive plant species are known or suspected to occur in the Petersburg 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. Garnet-bearing schist is found on the eastern side of the area.

**(5) Scientific and Educational Values:** There are no unique features for scientific or educational studies. The area is accessible by road from the City of Petersburg.

**(6) Scenic Values:** The area is unmodified; however, its overall integrity is not considered pristine because of the roading and timber harvest activity on nearly all sides of the area. When viewing the area from Sumner Strait, the timber harvest activities south of the Manzanita Roadless Area are apparent. When viewed from Dry Strait, a natural appearance dominates the landscape.

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 and Dry Strait, a marine travel route.

About 96 percent of the area is inventoried as Variety Class B (possessing landscape diversity that is common for the character type). The remaining 4 percent of the area is inventoried as Variety Class C (possessing a low degree of landscape diversity).

Most of the roadless area, 60 percent, is in Existing Visual Condition (EVC) I, where areas appear to be untouched by human activity. About 19 percent of the area is in EVC IV, in which changes to the landscape are easily noticed by the average person and may attract some attention. The alterations appear to be disturbances but resemble natural patterns. EVC V accounts for the remaining 21 percent of the area. These are areas in which changes to the landscape are obvious to the average person, and appear to be major disturbances.

**(7) Social, Cultural, and Historical Values:** The area is in the traditional territory of the Stikine Tlingit. No known cultural sites have been recorded within this area. A mild-cure fish plant reportedly operated along the shores of Dry Strait in the early 1900s. Most use is concentrated along the outside edges that are accessible by road. Subsistence use in the area includes deer and moose hunting and forest products gathering. Uses along the roads, which bound the area, are primarily hunting, berry picking, snowmobiling, and woodcutting. Some of the use is for subsistence. VCU 454, along Summer Strait, is listed among the VCUs with highest community use value and with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** The area is nearly bounded on all sides by roads and timber management activities. There are few topographic breaks or other natural features to define the boundaries. Feasibility of management in a wilderness condition is low to moderate, due to the amount of managed activities adjacent to this roadless area. Feasibility of management in an unroaded condition is moderate, due to the steepness of the terrain.

## 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 this trend is expected to continue. Petersburg and Wrangell are nearby tourism hubs. The close proximity of the roadless area to Petersburg is likely to result in an increase in tourist interest in the roadless area. There is little opportunity for outfitter/guide permits in the area. There is potential for trails, and possibly shelters, to access the ridgelines and saltwater. There is some potential for interpretive activities due to the area's accessibility and proximity to the Mitkof Highway and the Three Lakes Road. A State of Alaska boat ramp and unmaintained picnic area exist nearby.

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

**(3) Fish Resources:** No fish habitat enhancement projects are planned for the area.

**(4) Wildlife Resources:** No wildlife habitat enhancement projects are planned for the area.

**(5) Timber Resources:** There are approximately 6,037 acres inventoried as productive old-growth forest in the roadless area. None of the area is mapped as second growth due to timber harvest. Of this, approximately 3,506 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), 1,921 acres or 18 percent of this roadless area are estimated to be suitable for timber production. Approximately 608 of the suitable acres are mapped as high-volume old growth; of these acres, 104 are mapped as high-volume, coarse-canopy old growth.

Timber harvest would require a road system and/or logging systems capable of harvesting the area. Nearby roads could be extended to accomplish some of this.

**(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 area has low minerals potential. There is an active garnet mining operation in the area.

**(8) Transportation and Utilities:** There are no transportation or utility corridors within the roadless area. The Mitkof Highway follows the southern and southwestern boundary of the roadless area and a powerline follows the southwestern boundary, near the highway.

**(9) Water Availability and Use:** There are no developed recreation sites or other facilities located in this roadless area. As a result, demand does not exist for domestic water use. There are no existing or planned hydroelectric or domestic water projects.

**(10) Areas of Scientific Interest:** The area has no Inventoried Potential Research Natural Areas, nor identified for any other scientific purpose.

**(11) Land Use Authorizations:** There are no special land use authorizations in the area.

**(12) Land Status:** The roadless area is entirely National Forest System land. State land borders the roadless area in several places along its southeastern boundary.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** There is some interest in the area by local recreationists.

**(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 Manzanita Roadless Area. In 2001, HR 2908 proposed that the roadless area be managed as LUD II in an unroaded condition.

**(c) Public Input During Forest Plan Revisions and Appeals:** There were no direct comments on the roadless area. The Narrows Conservation Council, the Wrangell Resource Council, and others felt that the undeveloped areas on the island should be protected from timber harvest. The Southeast Alaska Conservation Council and the Alaska Rainforest Campaign recommended that the remaining unroaded areas on the island be managed as LUD II. However, timber industry organizations felt that there was no justification for this.

**(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, while others wanted the same level of development to continue.

**(e) Public Input Expressed for Project-level EISs and Other Input:** No comments were identified on project-level NEPA documents. Comments were received on the 1995 Final Mitkof Landscape Design. There were no comments specific to the Manzanita Roadless Area dealing with the roadless/wilderness issue. There were general comments concerning this issue for Mitkof Island. Some commenters wanted more roads to allow better access and some wanted roadless areas to remain unroaded. Some favored timber harvest and some wanted the remaining old growth (and deer habitat) protected.

**(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.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 223 for permanent protection as LUD II. SEACC recommended that the remaining roadless areas on heavily logged Mitkof Island be designated LUD II.

A number of commenters identified Southeast Mitkof Island as an area that needed protection.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The nearest roadless areas are North Mitkof, East Mitkof, and Crystal. All are within 2 to 12 miles, and are separated by roads and harvest areas. The nearest Wilderness is the Stikine-LeConte, portions of which are about 1 mile away, across Dry Strait.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 135 | 140 |
| Petersburg (Pop. 3,224) | 20 | 20 |
| Wrangell (Pop. 2,308) | 15 | 15 |
| Ketchikan (Pop. 14,070) | 85 | 105 |

The area is also approximately 22 miles by road from Petersburg.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Manzanita Roadless Area is located on the southeast portion of Mitkof Island, almost 20 miles southeast of the city of Petersburg. Forest roads, harvest units, the Mitkof Highway, and State-owned lands generally make up the irregularly-shaped boundaries. There is a small portion bounded by saltwater on the eastern side. The area exhibits great relief, as the core is made up of a ridge system, with drainages oriented in all directions. Drainage from this area forms the high gradient headwaters for several moderate-sized streams. Slopes are moderate to steep. Elevation ranges from sea level to nearly 2,500 feet.

The area is mostly natural appearing; however, it is heavily influenced by developments on adjacent lands. The natural integrity and apparent naturalness is high. The opportunity for solitude and primitive recreation is low.

None of the area is rated as distinctive for the character type from a scenery perspective. There are no known ecologic, geologic, scientific, or cultural features of significance in the area.

The roadless area includes about 1,985 acres of high-volume, old-growth forest. Of these acres, 236 are mapped as high-volume, coarse-canopy old growth.

The Manzanita Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 1 percent of the province. It is one of 12 inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The Manzanita Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents 0.5 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 roadless area lies completely within the Wrangell Narrows Metasediments Ecological Subsection and represents 3 percent of the ecological subsection. Approximately 11 percent of the Wrangell Narrows Metasediments Ecological Subsection is in existing wilderness and 18 percent is protected by other existing non-development LUDs.

The Manzanita 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 eight other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for managing the area in an unroaded condition, and there is little support for designating the area as wilderness. Designation would create a wilderness that is relatively small and 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 low.

## V. Environmental Consequences

The Manzanita Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, or 4 is implemented. Approximately 16 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 84 percent. The land in the development LUDs provides an estimated 1,921 acres that are suitable for timber production (1 percent of the suitable acres on the Petersburg Ranger District). Approximately 104 of the suitable acres are classified as high-volume, coarse-canopy

old growth. The timber sales, 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 roadless area.

Under Alternatives 5 or 7, a 6,556-acre portion of the area in Old-growth Habitat and Timber Production LUD would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses programs could be restricted in the Recommended Wilderness area. Lands in the roadless area suitable for timber production would be reduced to approximately 718 acres. 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 recommended wilderness area would receive long-term protection if designated wilderness.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. No timber harvest would be allowed. The values associated with the natural settings of the roadless area would receive long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses 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 receive long-term protection if designated wilderness.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 223 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | 6,556 | | 6,556 | 10,436 |
| 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 | 1,633 | 1,633 | 1,633 | 1,633 | 77 | | 77 | |
| Semi-remote Recreation | | | | | | | | |
| Recommended LUD II | | | | | | 10,436 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 1,954 | 1,954 | 1,954 | 1,954 | 1,954 | | 1,954 | |
| Modified Landscape | 1,801 | 1,801 | 1,801 | 1,801 | 1,801 | | 1,801 | |
| Timber Production | 5,048 | 5,048 | 5,048 | 5,048 | 48 | | 48 | |
| **TOTAL** | **10,436** | **10,436** | **10,436** | **10,436** | **10,436** | **10,436** | **10,436** | **10,436** |
| Suitable Timber Lands | 1,921 | 1,921 | 1,921 | 1,921 | 718 | 0 | 718 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Crystal (224)

**ACRES (NFS):** 19,609

**BIOGEOGRAPHIC PROVINCE:** Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 19

### I. Overview and Description

**(1) Location and Access:** The Crystal Roadless Area is located on the southwest part of Mitkof Island. The area is 15 miles southwest of the city of Petersburg. Petersburg is served by the Alaska Marine Highway and daily jet service. Forest roads, harvest units, the Mitkof Highway, and the Wrangell Narrows make up the irregularly-shaped boundaries. There are non-National Forest System lands along the western boundary along the Wrangell Narrows, and in the north near Crystal Lake. Roads provide access to portions of this roadless area from the city of Petersburg. Boats can access the northwest portion of the roadless area at Blind Slough and near the southeast portion at South Blind Slough. There are no areas suitable for landing wheeled airplanes within the roadless area. Access to the interior is by foot or helicopter.

**(2) History:** The area is in the traditional territory of the Stikine Tlingit. No known archaeological sites exist in the area, probably due to its mostly interior location. Nearby, the remains of villages, camps, fish traps, and culturally modified trees are present.

**(3) Geography and Topography:** Landforms consist primarily of two relatively small mountainous groups separated by the Sumner Creek watershed. To the north of Sumner Creek lies Crystal Mountain, the highest point on Mitkof Island, and associated ridgelines. To the south of Sumner Creek are the Sumner Mountains rising to a circular ridgeline of peaks of around 2,700 feet in elevation. Elevation ranges from sea level to 3,317 feet at the top of Crystal Mountain. The area contains only approximately 7 miles of saltwater shoreline, since the majority of land adjacent to the Wrangell Narrows along the western boundary of the roadless area is State land. Slopes are fairly steep overall, except in portions of the eastern and western edges where drainages approach saltwater. Crystal Lake, a large lake in the northern portion of the area, has been conveyed to the State of Alaska. There are several smaller lakes in the northwest corner of the area. The majority of the area is forested. Alpine covers about 579 acres while rock outcrops and cliffs cover another 359 acres. Freshwater lakes cover a combined area of 6 acres and there are 7 miles of saltwater shoreline. Island and islets account for approximately 23 acres of this roadless area.

**(4) Ecosystem:** The Blind Slough Special Interest Area is considered scenically and zoologically interesting. It has outstanding bird habitat, significant returns of king and coho salmon, and alpine features of Crystal Mountain.

> **(a) Classification:** Biogeographic Province. The area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province. The area is generally characterized by rolling, subdued topography and extensive muskeg areas. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.
>
> Ecological Section/Subsection. The Crystal Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), Wrangell Narrows Metasediments Ecological Subsection (see table below). Mountains of sedimentary origin have been extensively reshaped by glaciers and glacial deposition. Slopes are forested with hemlock, spruce, and cedar while lodgepole pine and mixed-conifer stands are found in poorly drained soils. Wetlands are common in low relief, depositional areas. Thick peat deposits have accumulated in some sites with poor drainage (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Wrangell Narrows Metasediments | 100% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well-drained or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg. Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Vegetation of this roadless area primarily consists of typical spruce-hemlock forests on the mountainsides and alpine vegetation (mapped as 579 acres) at elevations above 2,000 feet. Low-lying, poorly-drained portions of the area are often covered with muskeg interspersed with slow-growing trees. 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 17,872 acres mapped as forest land of which 8,330 acres or 47 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 2,215 acres or 27 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 337 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:** 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. VCU 447 was rated high for sport fish and commercial fish values, although that small portion of VCU 447 in this roadless area did not contribute significantly to that rating. VCU 451 was also rated high for sport fish values. VCUs 447 and 452 were rated as moderately-high value for commercial fish and VCU 451 was rated as having high commercial fish value. VCUs 448 and 452 were rated as having high value estuaries. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 451 and 452 as primary producers of pink salmon, and VCU 448 as a primary sportfish producer.

Streams in this area provide habitat for coho, pink, and chum salmon; cutthroat trout; and Dolly Varden char. Blind River, along the northern boundary, is the most important stream, with fish values for pink, coho, chinook, and chum salmon, as well as steelhead, cutthroat trout, and Dolly Varden char.

**(e) Wildlife Resources:** A population of Sitka black-tailed deer, moose, wolves, black bear, and bald eagles range over the roadless area. A few mountain lion sightings have recently been reported on the island. They are probably migrating into Southeast Alaska from Canada via the river corridors, and are considered incidental species at the edge of their range. Brown bears and elk are rarely seen on Mitkof Island.

Mink, river otters, beaver, marten, ermine, red squirrel, northern flying squirrel, porcupine, mice, shrew, and voles are well distributed over Mitkof Island. There are occasional sightings of fisher and wolverine but they are considered incidental species at the edge of their range. Bats are present during the summer months and occasionally over winter in man-made structures.

Bird species that may be found in the area include bald eagles, wintering trumpeter swans, northern goshawks, red-tailed hawks, sharp shinned hawks, marbled murrelets, great blue herons, and Canada geese. Numerous duck and goose species, sandhill cranes, spruce grouse, blue grouse, and ptarmigan may also be

found on Mitkof Island. Other bird species that might be found in the area include: great horned owls, western screech owls, saw-whet owls, and pigmy owls.

Red-throated, Pacific, and common loons all occur on the Mitkof Island. Several plover, yellowlegs, and sandpiper species occur, mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the Mitkof Island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Amphibians known to occur on Mitkof Island include the rough-skinned newt, the western toad, and spotted frogs. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts. Spotted frogs are found primarily in lacustrine and palustrine ecosystems and were probably introduced by local residents who brought them back from the Stikine River as pets.

Marine mammals known to inhabit the waters surrounding Mitkof Island are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and the harbor seal.

**(5) Management Direction and Current Uses:** The roadless area was allocated to six Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These six LUDs are Modified Landscape, Timber Production, Scenic Viewshed, Special Interest Area, Old-growth Habitat, and Wild River.

| LUD | Acres |
|---|---|
| Modified Landscape | 4,917 |
| Timber Production | 4,351 |
| Scenic Viewshed | 4,000 |
| Special Interest Area | 2,929 |
| Old-growth Habitat | 2,865 |
| Wild River | 547 |

Much of the roadless area, approximately 68 percent, was allocated to LUDs that allow development (Modified Landscape, Timber Production, Scenic Viewshed). Approximately 25 percent of the roadless area was allocated to the Modified Landscape LUD. Most of the eastern portion of the roadless area was allocated to the Modified Landscape LUD. Approximately 22 percent of the roadless area was allocated to the Timber Production LUD. The Scenic Viewshed LUD was assigned to approximately 20 percent of the roadless area. Land with this LUD can be seen from Visual Priority Travel Routes and Use Areas such as Sumner Strait and Wrangell Narrows.

Approximately 32 percent of the area was allocated to non-development LUDs (Special Interest Area, Old-growth Habitat, Wild River). South of Blind Slough approximately 15 percent of the roadless area was allocated to the Special Interest Area LUD. The Blind Slough Special Interest Area is recognized for its zoological and scenic values. Approximately 15 percent of the roadless area was allocated to the Old-growth Habitat LUD, located south of Blind Slough. Along 5 miles of the Blind River, approximately 3 percent of the roadless area was allocated to the Wild River LUD. Only the southern shore of the Blind Wild River is in the roadless area. There is a road adjacent to the northern shore.

Areas along the Wrangell Narrows to the north and near Crystal Lake (outside the roadless area) have been conveyed to the State of Alaska. The top of Crystal Mountain has been designated as a communications site.

An EIS has been completed for the Woodpecker Timber Sale Project, but it has not been sold (USDA Forest Service, 2001). It would extend the existing road system into the roadless area in the south and west and harvest timber along these roads.

Recreation uses include: king and coho salmon fishing; trout and steelhead fishing; deer, moose, and waterfowl hunting; hiking; cross-country skiing; snowmobiling; other snow sports; ice skating; sightseeing; fish and wildlife viewing; and gathering forest products. Due to its proximity to Petersburg and accessibility by road and water, the Crystal Roadless Area receives moderate to high recreational use. Lands used for these activities are accessible by roads that border the roadless area on three sides of the area. Crystal Lake and the alpine ridges above attract recreationists despite the lack of improved access. A short section of the Ohmer Creek Trail is near the boundary of the roadless area. There is some subsistence use in the area, mostly deer hunting. No outfitter/guide permits were issued for the roadless area in 2000. There are two special use permits for recreation cabins in the roadless area.

**(6) Appearance (Apparent Naturalness):** The majority of the area appears unmodified. Exceptions are areas adjacent to timber harvest activities, roads, the communications site.

**(7) Surroundings (External Influences):** Roads and timber management activities occur on three sides of the roadless area. Noise and sights of vehicles and active timber sales may occur periodically, particularly in those portions of the roadless area closest to the activities. Frequent low-flying aircraft may temporarily distract visitors in the area. Wrangell Narrows, which receives heavy boat traffic, is adjacent to the western boundary of the roadless area. Much of the area along the Wangell Narrows is non-National Forest System land, as is the area around Crystal Lake, including the dam and penstock.

**(8) Attractions and Features of Special Interest:** The proximity to Petersburg by roaded access makes portions of this roadless area attractive for recreation. The prime attractions are hunting, fishing, gathering forest products, and hiking the system of ridges in alpine terrain, which provides outstanding views. Saltwater access is also an attraction. The area contains seven inventoried recreation places, which cover 5,873 acres, or 30 percent of the roadless area. The Blind Slough Special Interest Area, including Crystal Lake, has outstanding bird and fish values and the scenic alpine features of Crystal Mountain.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** There have been minor additions to the boundaries since 1989. The area along the roaded and harvested portions has been more carefully defined, adding to the size of the roadless area. Also, the area around Crystal Lake, including the dam and penstock area, has been dropped from the roadless area since it was conveyed to the State of Alaska. Several small areas along the boundaries formed by adjacent developments have been excluded between the Draft and Final SEIS to improve manageability in these areas.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is unmodified; however, its overall integrity is not considered pristine. Adjacent management activities have negatively affected the natural integrity of portions of this area. Nearly all the watersheds within the area have developments in them. The irregular shape of the area and development on adjacent private land, such as the dam and penstock, also lessen its natural integrity and apparent naturalness.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a moderate opportunity for solitude within the area. 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; the areas on the fringes near road access receive the highest use. Generally, a person camped or traveling within the area away from the roads is unlikely to encounter others nearby. Timber harvest or periodic activities in adjacent areas affect the opportunity for solitude when they are occurring. The steep nature of the landforms and relationship to external influences allow a visitor to feel somewhat remote from the sights and sounds of human activity. The area is readily accessible from the community of Petersburg.

The system of ridgelines, which make up the greatest amount of alpine setting on Mitkof Island, is an important recreation feature. Crystal Lake, road access from Petersburg, and saltwater access also attract recreationists. The

steep terrain, the climate, the potential for avalanches on Crystal Mountain, and the presence of large wild animals present a moderate degree of challenge and risk, necessitating good preparation and knowledge of outdoor survival skills for the backcountry traveler.

The area provides primarily Semi-Primitive Recreation opportunity as inventoried with the Recreation Opportunity Spectrum (ROS) System. 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) | 14,651 | 75% |
| Roaded Natural (RN) | 1,313 | 7% |
| Roaded Modified (RM) | 3,645 | 19% |

The area contains seven inventoried recreation places, which cover 5,873 acres, or 30 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| SPNM | 1 | 4,621 |
| RN | 2 | 641 |
| RM | 5 | 612 |

* 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 sites in the roadless area. The Ohmer Creek Trail has a short section near the southeastern boundary.

**(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 Crystal Roadless Area was given a rating of 20 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 effects of developments and activities on wilderness attributes within the area.

**(4) Ecologic and Geologic Values:** The roadless area is small and irregular. It is not connected to any other roadless area or wilderness. The Blind Slough Special Interest Area has excellent bird and fish habitat and includes the scenic alpine features of Crystal Mountain.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 447, 451 and 452 (all of the area except the western section) as primary producers of salmon, and VCUs 447 and 448 along Wrangell Narrows as primary sport fish producers (ADF&G, 1998). The portion of VCU 448 within the boundaries of the roadless area contains no fisheries resources and does not contribute to the high sport fish rating.

Pink, coho, and chum salmon plus cutthroat trout, steelhead, and Dolly Varden char can be found in this area. Blind River has high fish values for coho, chinook, and chum salmon, as well as steelhead, cutthroat trout, and Dolly Varden char. It has an estimated annual peak escapement of 68,200 pink salmon and good coho smolt capability. The State of Alaska operates a fish hatchery that produces chinook and coho salmon, and steelhead. ADF&G lists Blind River as one of 65 "important watersheds" for salmon in Southeast Alaska. This area is a major sport fishing area. This river is one of the few places in the region where sport fishing for chinook salmon is permitted from the river bank. Blind River is close to a population center and is used by many people.

**(b) Wildlife Resources:** A population of Sitka black-tailed deer, wolves, marten, river otter, northern flying squirrel, black bear, and eagles range over the roadless area, as do moose. Elk sightings have occurred on Mitkof Island. One brown bear was recently killed near this area, but brown bears are rare on Mitkof Island. Blind River is important winter habitat for trumpeter swans. Northern goshawks, red-tailed hawks, and sharp shinned hawks may occur in this area, but no nests have been found. A great blue heron rookery was identified in the Woodpecker project area, which is south of the roadless area. One marbled murrelet fledgling was found in the Woodpecker Cove Small Old-growth Habitat Reserve in 1999 (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. Blind River on the north boundary of the wilderness area is one of the most northern wintering areas for the trumpeter swan. 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. Peale's peregrine falcon may migrate through this area. 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 Petersburg Ranger District.

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

**(5) Scientific and Educational Values:**. The Blind Slough Special Interest Area is considered an important zoological area because of its excellent bird and fish values. The system of ridgelines, which comprises the greatest amount of alpine setting on Mitkof Island, is of some interest.

**(6) Scenic Values:** An important feature of the Blind Slough Special Interest Area is the outstanding beauty of the Crystal Mountain scenery. The roadless area has retained a mostly natural state on Crystal Mountain and associated ridgelines and the northern portion of the Sumner Mountains. A communications site on the top of Crystal Mountain detracts from the natural appearance. This natural state of the roadless area dominates views from Blind Slough and the part of Wrangell Narrows between Kupreanof Island and Mitkof Island. Adjacent areas are exceptions to the natural appearance and include timber harvest activities, which can be seen from the southernmost part of Wrangell Narrows between Woewodski Island and Mitkof Island. Roads and timber activity can also be seen from Sumner Strait.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Wrangell Narrows, a tour ship route and dispersed recreation area; Sumner Strait, a tour ship route; Blind River, a designated Recreational River; South Blind Slough, a saltwater use area; and Crystal Mountain, a dispersed recreation area.

Twenty-five percent of this roadless area was inventoried in Variety Class A (possessing landscape diversity that is unique for the character type). Most of the area, 74 percent, was inventoried in Variety Class B (possessing landscape diversity that is common for the character type).

Most of the roadless area, 84 percent, is in Existing Visual Condition (EVC) I. These areas appear to be untouched by human activity. EVC II accounts for 2 percent, in which changes to the landscape are not noticed by the average person. About 5 percent of the area is in EVC IV, in which changes to the landscape are easily noticed by the average person and may attract some attention. They appear to be disturbances but resemble natural patterns. EVC V accounts for approximately 9 percent. These are areas in which changes to the landscape are obvious to the average person, and appear to be major disturbances.

**(7) Social, Cultural, and Historical Values:** The area is in the traditional territory of the Stikine Tlingit. Though no known archaeological sites exist in the area, nearby is evidence of prehistoric period villages, camps, fish traps, and culturally-modified trees. Blind Slough, which is adjacent to the north side of the roadless area, provided subsistence resources through historic times. Targeted resources include waterfowl and salmon. Most use is concentrated along the outside edges that are accessible by roads. Uses along the roads, which surround the area, are primarily hunting, fishing, berry picking, and woodcutting. Some of the use is for subsistence, particularly deer and moose hunting. VCUs 447, 451 and 452 (all of the roadless area except the western portion) are listed as having the highest community use values. All VCUs in the roadless 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:** The area is bounded on three sides by roads and timber management activities. Private land occurs along the west side and at Crystal Lake. There are few topographic breaks or other natural features to define the area. Feasibility of management in a wilderness condition is low to moderate, due to the amount of development activities adjacent to this roadless area. Feasibility of management in an unroaded condition is moderate, as it maintains traditional opportunities. Changing the boundary is not likely to create 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 this trend is expected to continue. Petersburg and Wrangell are hubs for this increase in tourism. The close proximity of the roadless area to Petersburg is unlikely to result in an increase in tourist interest in the roadless area due to the condition of the roads and the developments near the boundaries. There is little opportunity for outfitter/guide permits. Potential trails and shelters have been identified to access the ridgelines. There is some potential for interpretive activities due to the area's accessibility and proximity to the Mitkof Highway, the Three Lakes Loop Road, and the popular Blind Slough recreation 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 for the roadless area.

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

**(5) Timber Resources:** There are approximately 8,330 acres inventoried as productive old-growth forest in the roadless area. There is no second growth timber due to harvest. Of this, approximately 5,134 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), 2,129 acres or 11 percent of this roadless area are estimated to be suitable for timber production. Approximately 483 of the suitable acres are mapped as high-volume old growth; of these acres, 28 are mapped as high-volume, coarse-canopy old growth.

The Woodpecker Project FEIS (USDA Forest Service, 2001) would extend the existing road system into the roadless area in the south and west and harvest timber along these roads.

**(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 area within and adjacent to the Blind River corridor has no mining claims. Neither the U.S. Bureau of Land Management nor the USGS list this area as having potential for mineral development.

The roadless area contains an estimated 597 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 corridors identified for the roadless area except where new roads may be needed to access areas available for development.

**(9) Water Availability and Use:** No developed recreation sites exist to create a water demand, but there are two special use recreation cabins in the area. There are no existing or planned hydroelectric or domestic water projects within the roadless area. Crystal Lake, outside the roadless area, provides a water source for the State's Crystal Lake Fish Hatchery and for domestic use by residents at the hatchery. There is a concrete dam on the outlet of Crystal Lake and a penstock that brings water down the mountain where it is used to generate electricity for the city of Petersburg.

**(10) Areas of Scientific Interest:** The Blind Slough Special Interest Area has outstanding bird habitat and significant returns of king and coho salmon. Management of the area as wilderness may limit the research opportunities.

**(11) Land Use Authorizations:** Two cabins near Blind Slough and communication facilities at the Crystal Mountain Communication Site are authorized.

**(12) Land Status:** All land within this roadless area is part of the National Forest System. An extensive area along Wrangell Narrows, and the basin and area around Crystal Lake have been conveyed to the State of Alaska.

## IV. Wilderness Areas Evaluation

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Portions of the area are traditional and/or popular recreation areas. Support for a trail to the ridgeline and alpine terrain above Crystal Lake has evolved from several recreation public meetings.

**(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 Crystal Roadless Area. In 2001, HR 2908 proposed that the roadless area be managed in an unroaded condition as LUD II land.

**(c) Public Input During Forest Plan Revision and Appeals:** There were no direct comments on the roadless area. The Narrows Conservation Council, the Wrangell Resource Council, and others felt that the undeveloped areas on Mitkof Island should be protected from timber harvest. The Wrangell Resource Council felt that the remaining roadless areas should be managed as Old-growth Habitat or Primitive Recreation. The Southeast Alaska Conservation Council and the Alaska Rainforest Campaign recommended that the remaining unroaded areas on the island be managed as LUD II lands. They felt that these areas merited protection due to their outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. However, timber industry organizations felt that there was no justification for this.

**(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, while others wanted the same level of development to continue.

**(e) Public Input Expressed for Project-level EISs and Other Input:** Comments were received on the Final Mitkof Landscape Design (USDA Forest Service, 1995). There were no specific comments on the Crystal Roadless Area dealing with the roadless/wilderness issue. There were general comments concerning this issue for Mitkof Island. Some commenters wanted more roads to allow better access and some wanted roadless and unroaded areas to remain unroaded. Some favored timber harvest and some wanted the remaining old growth (and deer habitat) protected. Comments were also received on the Woodpecker Project Area DEIS in 2000 (USDA Forest Service, 2000). The Woodpecker project area covers the southern portion of the roadless area, which is allocated to development LUDs. The City of Petersburg supported timber harvest in the area, as did the Alaska Forest Association and several individuals. Some comments favored creating a loop road, outside the roadless area. The Narrows Conservation Council was concerned with the adverse effects that roads would have on wildlife, fish, and

subsistence. The Southeast Alaska Conservation Council recommended that no decision be made until after the roadless issue is resolved at a national level. Some individuals supported this recommendation.

**(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 that the remaining roadless areas on heavily logged Mitkof Island be designated LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 224 for permanent protection as LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The nearest roadless areas are Woewodski, North Mitkof, East Mitkof, and Manzanita. All are within 2 to 12 miles of the Crystal Roadless Area, and are separated by roads and harvest areas. The nearest wilderness areas are the Stikine-LeConte and the Petersburg Creek/Duncan Salt Chuck, portions of which are about 8 to 15 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) | 130 | 135 |
| Petersburg (Pop. 3,224) | 15 | 15 |
| Wrangell (Pop. 2,308) | 20 | 15 |
| Ketchikan (Pop. 14,070) | 90 | 110 |

Petersburg is the nearest stop on the Alaska Marine Highway, and is connected to the roadless area by road.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Crystal Roadless Area is located on the southwest part of Mitkof Island. Forest roads, harvest units, the Mitkof Highway, and the Wrangell Narrows make up the irregularly-shaped boundaries. There are non-National Forest System lands along the western boundary along the Wrangell Narrows, and in the north near Crystal Lake. Two mountainous areas dominate the roadless area. To the north lies Crystal Mountain and associated ridgelines. To the south lies the northern portion of the Sumner Mountains. A river valley separates the two mountain areas. Elevation ranges from sea level to 3,317 feet at Crystal Peak.

The area is mostly unmodified but is influenced by developments and activities on adjacent lands. The natural integrity and apparent naturalness is considered to be high. The opportunity for solitude is considered moderate and the opportunity for primitive recreation is high.

Approximately 25 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The Blind Slough Special Interest Area is considered an important zoological area because of its excellent bird and fish values.

The roadless area includes about 2,215 acres of high-volume, old-growth forest. Of these acres, 337 are mapped as high-volume, coarse-canopy old growth.

The Crystal Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 2 percent of the province. It is one of 12 inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The Crystal Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents approximatley 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.

The Crystal Roadless Area lies completely within the Wrangell Narrows Metasediments Ecological Subsection and represents approximately 6 percent of the ecological subsection. . Approximately 11 percent of the Wrangell Narrows Metasediments Ecological Subsection is in existing wilderness and 18 percent is protected by other existing non-development LUDs.

The Crystal 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 area in an unroaded condition, but there is little support for designating the area as wilderness. Designation would create a wilderness that contains the Blind Slough Special Interest Area and some areas with distinctive scenery. It also would be a wilderness influenced by developments and activities in nearby areas. Portions of the area is also actively managed for timber sales and is included in the Woodpecker Timber Sale Final EIS. 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 Crystal Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 32 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 68 percent. The land in the development LUDs provides an estimated 2,129 acres that are suitable for timber production (1 percent of the suitable acres on the Petersburg Ranger District). Approximately 28 of the suitable acres are classified as high-volume, coarse-canopy old growth. Timber sales planned in the Woodpecker Final EIS will continue. The roadless area contains an estimated 597 acres of undiscovered locatable mineral resources; all of the acres are considered to have low potential for development. The high scenic values and the Blind Slough Special Interest Area would not be affected. The timber sales, 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 areas that allow such activities.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use 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 values and those associated with the Blind Slough Special Interest Area, would receive long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses 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, including the high scenic values and those associated with the Blind Slough Special Interest Area, would receive long-term protection if designated wilderness.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 224 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 19,609 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | 2,929 | 2,929 | 2,929 | 2,929 | 2,929 | | 2,929 | |
| Remote Recreation | | | | | | | | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | 2,865 | 2,865 | 2,865 | 2,865 | 2,865 | | 2,865 | |
| Semi-remote Recreation | | | | | | | | |
| Recommended LUD II | | | | | | 19,609 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | 547 | 547 | 547 | 547 | 547 | | 547 | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | | 4,000 | |
| Modified Landscape | 4,917 | 4,917 | 4,917 | 4,917 | 4,917 | | 4,917 | |
| Timber Production | 4,351 | 4,351 | 4,351 | 4,351 | 4,351 | | 4,351 | |
| **TOTAL** | **19,609** | **19,609** | **19,609** | **19,609** | **19,609** | **19,609** | **19,609** | **19,609** |
| Suitable Timber Lands | 2,129 | 2,129 | 2,129 | 2,129 | 2,129 | 0 | 2,129 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Kadin (225)

**ACRES (NFS):** 2,022

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 20

### I. Overview and Description

**(1) Location and Access:** This roadless area consists of two small islands, Kadin Island and Greys Island, located northwest of Wrangell Island. Wrangell, served by the Alaska Marine Highway and regular air service, is approximately 5 air miles southeast of the area. Sumner Strait, Stikine Strait, Eastern Passage, and the Stikine River all converge in this area. At low tides, Kadin Island is nearly surrounded by tideflats formed by the sediments of the Stikine River. These tideflats also extend to the east side of Greys Island, which is located further west. Access is by way of boat or floatplane. There are no sites suitable for landing wheeled aircraft.

**(2) History:** Both islands were claimed by the Stikine Tlingit and evidence of their use is indicated by the presence of petroglyphs on Kadin Island. Kadin and Greys Islands were named for an Aleut member of a Russian surveying party and a Russian ship used to transport land surveyors, respectively. The waters west of these islands were evidently used as an anchorage by the Russians and the islands were likely visited by early fur traders traveling between the Stikine River and Fort Wrangell. The only site currently recorded in the area is the remains of a fox farm begun on Greys Island in 1923. Kadin is known locally as High Island, in reference to its height relative to nearby islands.

**(3) Geography and Topography:** Kadin Island rises fairly steeply and uniformly to a height just above 1,000 feet. Greys Island, which rises fairly gently to a height just above 400 feet, is slightly steeper on the northern side than the southern side. Both islands are heavily influenced by their location at the mouth of the Stikine River. High winds moving down the Stikine River canyon pick up silt from the unvegetated glacial river floodplain and deposit it as loess on islands at the river's mouth, including Kadin and Greys Islands. Both islands are completely covered by forest and contain a combined 10 miles of shoreline on saltwater. There are no significant streams on the islands. The small drainages that do exist are steep and short to saltwater. There are no ice and snow, alpine or rock features mapped in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is generally subject to continental influence from the mainland and the Stikine River. Glacial flour is present in the marine environment in this area nearly year round. All forest plant associations except those occurring only on outer coast areas are present.

Ecological Section/Subsection. The Kadin Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), Stikine River Delta Ecological Subsection (see table below). Silt-laden runoff, entering the Stikine River from the adjacent mountains, has produced an extensive delta in Frederick Sound and Sumner Strait. Much delta silt has blown to nearby islands and valleys forming a productive, well-drained soil that supports stands of hemlock and Sitka spruce. Large sedge meadows are found along the intertidal delta. The delta is an important spring feeding area for bald eagles (> 1,000) and migrating shorebirds (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Stikine River Delta | 100% |

**(b) Soils:** Soils are unique because of the influence of the Stikine River. High winds moving down the Stikine River canyon pick up fine sand and silt from the unvegetated glacial river floodplain and deposit it as loess on islands at the river's mouth. The continuing rain of loess onto the upper soil layers provides a supply of unleached, nutrient-rich soil material to the forests of the islands. The loess deposition overcomes the process of acid bog formation (paludification) that overtakes most stable sites of moderate topographic relief in the Tongass National Forest. Few areas in the world have a combination of high rainfall and recent loess deposition, so the properties of the soils here are of special interest. Thick loess soils also have a high water storage capacity, so the hydrology of the island is of interest too. The soils are erosive due to a lack of coarse fragments in the loess.

**(c) Vegetation:** Both islands are heavily vegetated with spruce/hemlock and spruce/devil's club forest types.

There are approximately 2,005 acres mapped as forest land, of which 1,997 acres or approximately 100 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 1,614 acres or 81 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 207 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 are no fish-bearing streams on either island.

**(e) Wildlife Resources:** A small population of Sitka black-tailed deer and black bear range over the roadless area. The concentration of bald eagle nests on Kadin Island is second only to parts of Admiralty Island.

**(5) Management Direction and Current Uses:** This area is allocated to two Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These two LUDs are Research Natural Area and Semi-remote Recreation.

| LUD | Acres |
|---|---|
| Research Natural Area | 1,630 |
| Semi-remote Recreation | 392 |

All of the roadless area was allocated to non-development LUDs (Research Natural Area, Semi-remote Recreation). Kadin Island, which comprises 81 percent of the roadless area, was entirely allocated to the Research Natural Area LUD. The Kadin Island Research Natural Area has loess soils, unusual for the area. The remaining 19 percent of the roadless are on Greys Island was allocated to the Semi-remote Recreation LUD.

Present recreation levels are low except during the fishing season when the area around Greys Island is heavily used. Recreationists accessing the Stikine-LeConte Wilderness via the Stikine River pass by this area. There is some subsistence use in the area. There is a small weather station on the north shore of Kadin Island.

**(6) Appearance (Apparent Naturalness):** Overall**,** the roadless area has high scenic quality with a mostly natural appearing landscape. The area is visible from Sumner Strait, Stikine Strait, and Eastern Passage, all of which converge in the general area. The area is also visible to recreationists accessing the Stikine-LeConte Wilderness via the Stikine River and visitors staying at the Public Recreation Cabins on Gut, Little Dry, Sergief and Farm Islands to the northeast, and the Garnet Ledge Cabin on the mainland. The area is also visible from the Mitkof Highway, which follows the south shoreline of Mitkof Island, and the city of Wrangell, each located approximately 5 miles from the islands that comprise the roadless area.

**(7) Surroundings (External Influences):** The two islands that comprise this roadless area are located at the mouth of the Stikine River. Several nearby islands, especially Liesnoi and Sokolof, have been impacted by

management activities, mainly timber harvest and road building. These management activities and their effects are visible from this roadless area. Areas of past timber harvest are also visible to the north on Mitkof Island and to the south on Woronkofski and Wrangell Islands. The town of Wrangell can also be seen. The sights and sounds of any future harvesting activities in these nearby areas may also affect the Kadin Roadless Area. Boats frequent the nearby saltwater because the Stikine River is a major destination. The proximity to Wrangell and Petersburg also contributes many pleasure craft to the vicinity. Boats may sometimes be visible from parts of the roadless area. These islands are located on the final approach to the Wrangell airport and low-flying aircraft may temporarily distract visitors in the area at times.

**(8) Attractions and Features of Special Interest:** The unique soil associations on these islands result in the occurrence of a unique form of high-productivity Sitka spruce/devil's club forest type. The fringe of Kadin Island and part of the fringe of Greys Island are subject to tidal influence and changes in water level due to shifts of the river. There is a high concentration of eagle nests on Kadin Island. The area contains two inventoried recreation places, which cover 1,785 acres, or 88 percent of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** This roadless area only included Kadin Island in 1989. Greys Island, which was identified as a separate roadless area (# 226) in 1989, is now included in the 2003 version of the Kadin Roadless Area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The natural integrity of this unmodified area is high. The overwhelming natural appearance of the area suggests that it is suitable for wilderness classification if it were an addition to the nearby Stikine-Leconte Wilderness. There is a small weather station on the north shore of Kadin Island.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a low opportunity for solitude and primitive recreation within the area. Low-flying aircraft and frequent marine traffic pass nearby and may be observed by people in this roadless area. Present recreation use levels are low except during the salmon fishing season when the area around Greys Island is heavily used. Generally, a person camped or traveling inland is unlikely to encounter others. Timber harvest or other activities, which occur periodically in the nearby areas, may significantly affect the opportunity for solitude when they are occurring.

Travel on Kadin Island would require moderate backcountry skills and travel on Greys would require low to moderate skills because of its flatter topography. The presence of black bears presents a degree of challenge and a need for caution.

There are no developed recreation opportunities in the area. Visitors do not generally feel remote from the sights and sounds of human activity around the island. The area is accessible by boat from the community of Petersburg in about 2 hours, and from Wrangell in less than 1 hour. During the salmon fishing season, the area adjacent to Greys Island is a very popular fishing location.

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) | 2,002 | 100% |

The area contains two inventoried recreation places, which cover 1,785 acres, or 88 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| SPM | 2 | 1,785 |

**(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 Kadin Roadless Area was given a rating of 20 out of 28 possible points. The Greys 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 Kadin Roadless Area (which now includes Greys Island) was given a rating of 20.

**(4) Ecologic and Geologic Values:** Both islands are forested. The unique soil associations found on both islands, the hydrology, and the occurrence of a unique form of high-productivity Sitka spruce/devil's club forest type are special values of this area.

**(a) Fish Resources:** There are no fish-bearing streams on either island.

**(b) Wildlife Resources:** A small population of Sitka black-tailed deer and black bear range over the roadless area. The concentration of bald eagle nests on Kadin Island is second only to parts of Admiralty 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, eight sensitive plant species are known or suspected to occur in the Wrangell 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, except for unique soil associations. See below (Scientific and Educational Values) for a description of the unique soil associations

**(5) Scientific and Educational Values:** The unique soil associations found on both islands, the hydrology, and the occurrence of a unique form of high-productivity Sitka spruce/devil's club forest type are special features of this area. The fringe of Kadin Island and part of the fringe of Greys Island are subject to tidal influence and changes in water level due to shifts of the river, and may also be of scientific interest. The island forms part of the gateway for the majority of visitors traveling up the Stikine River. The area is generally accessible to school-age children because it can be reached by boat from the community of Petersburg in about 2 hours, and from Wrangell in less than 1 hour.

Kadin Island was inventoried as a potential Research Natural Area (RNA) by the RNA Task Force because it best represents the influence of the Stikine River on soils and plants associations. As a result, it was assigned the Research Natural Area LUD by the current Forest Plan.

**(6) Scenic Values:** Overall**,** the roadless area has high scenic quality with a mostly natural appearing landscape. Kadin Island, which rises fairly steeply and uniformly to a height just above 1,000 feet, is known locally as High Island in reference to its height relative to nearby islands. Greys Island rises fairly gently to a height just above 400 feet.

The area is visible from Sumner Strait, Stikine Strait, and Eastern Passage, all of which converge in the general area. The area is also visible to recreationists accessing the Stikine-LeConte Wilderness via the Stikine River, and by

visitors staying at the Forest Service cabins on Gut, Little Dry, Sergief, and Farm Islands to the northeast, and the Garnet Ledge Cabin on the mainland. The area is also visible from the Mitkof Highway, which follows the south shoreline of Mitkof Island, and the city of Wrangell, each located approximately 5 miles south of the islands.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Stikine Strait (Alaska Marine Highway and Tour Ship Routes); Sumner Strait (Tour Ship Route); Dry Strait (Other Marine Travel Route); Mitkof State Highway (Public Use Road); and the city of Wrangell (Community).

The entire area was inventoried Variety Class B (possessing landscape diversity that is common for the character type). Kadin Island (80 percent of the area) has an Existing Visual Condition (EVC) Type I, where the landscape appears to be untouched by human activity. Approximately 19 percent of the area, including Greys Island, has an EVC Type V, where changes to the landscape are obvious to the average visitor and appear to be major disturbances.

**(7) Social, Cultural, and Historical Values:** Both islands were claimed by the Stikine Tlingit and evidence of their use is indicated by the presence of petroglyphs on Kadin Island. The waters west of these islands were evidently used as an anchorage by the Russians and the islands were likely visited by early fur traders traveling between the Stikine River and Fort Wrangell. The only site currently recorded in the area is the remains of a fox farm begun on Greys Island in 1923. The area is accessible by boat from the community of Petersburg in about 2 hours, and from Wrangell in less than 1 hour.

Present recreation use levels are low except during the salmon fishing season when the area around Greys Island is heavily used. Subsistence use occurs in the area. This area accounted for more than 15 percent of Wrangell's annual average total deer harvest during 1987 to 1994. VCU 455, which encompasses this roadless area, was not included among the VCUs listed as highest community use value but it was listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is bounded on all sides by saltwater. The islands do not, however, lend themselves well to being managed as a wilderness by themselves due to their small size, the amount of marine traffic in the area, and the activities in nearby areas. However, this area is adjacent to the existing Stikine-LeConte Wilderness and recreationists accessing the wilderness via the Stikine River generally pass the Kadin Roadless Area. Thus its addition as wilderness, would extend the existing Stikine-LeConte Wilderness. Continued management of these islands in an unroaded condition is likely because of their small size, steep topography, and shorelines which do not provide a practical location for a log transfer facility. Maintenance of the area in an unroaded condition would enhance Kadin Island's status as a potential Research Natural Area.

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

**(1) Recreation, Including Tourism Potential:** There is some potential for outfitter and guide permits, or for developed trails, cabins, or shelters.

**(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:** No fish habitat enhancement projects are identified in the Tongass Land Management Plan (USDA Forest Service, 1997).

**(4) Wildlife Resources:** As identified in the Tongass Land Management Plan (USDA Forest Service, 1997), wildlife enhancement projects are not planned for this area.

**(5) Timber Resources:** There are approximately 1,997 acres mapped as productive old growth in the roadless area. There is no second growth due to timber harvest. Of these acres, 324 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs in this area, none of the acres are 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:** The area has low minerals potential.

**(8) Transportation and Utilities:** There are no known transportation or utility plans for this area. There is, however, a small weather station on the north shore of Kadin Island.

**(9) Water Availability and Use:** There are no existing or planned hydroelectric or domestic water projects in the area.

**(10) Areas of Scientific Interest:** Kadin Island was inventoried as a potential Research Natural Area (RNA) by the RNA Task Force because it best represents the influence of the Stikine River on soils and plants associations. As a result, it was assigned the Research Natural Area LUD by the current Forest Plan.

The unique soil associations found on both islands, the hydrology, and the occurrence of a unique form of high-productivity Sitka spruce/devil's club forest type are special features of this area. The fringe of Kadin Island and part of the fringe of Greys Island are subject to tidal influence and changes in water level due to shifts of the river, and may also be of scientific interest. The island forms part of the gateway for the majority of visitors traveling up the Stikine River. Kadin Island also has a high concentration of eagle nest trees.

**(11) Land Use Authorizations:** There are no special uses in the area.

**(12) Land Status:** This 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:** Most use of the area is marine-oriented 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 Kadin or Greys Roadless Areas. In 2001, HR 2908 did not propose the area for wilderness, but did propose that Greys Island be classified as a Congressionally Designated LUD II area and managed in an unroaded condition. This is likely the case for Kadin Island also. However, a text label covers this island on the map of the proposal.

**(c) Public Input During Forest Plan Revision and Appeals:** There were no public comments or appeals that directly pertained to 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 National Forest 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 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 recommend additional conservation measures be integrated into the area's management to ensure the long-term protection of this island's bald eagle population.

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 Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 225 for permanent protection as LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Stikine-LeConte Wilderness lies just to the east. Recreational use is moderate in the immediate area except during the salmon fishing season when the area around Greys Island is heavily used. The surrounding areas include roadless areas. In most cases, the shorelines of these areas have been developed, forming a buffer between the roadless area and the saltwater. One exception to this is the Madan Roadless Area located immediately south of the Stikine-LeConte Wilderness.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 80 | 105 |
| Wrangell (Pop. 2,308) | 5 | 5 |
| Petersburg (Pop. 3,224) | 25 | 30 |
| Juneau (Pop. 30,711) | 145 | 155 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Reservation System:** This Kadin Roadless Area consists of two small islands, Kadin Island and Greys Island, located northwest of Wrangell Island. Sumner Strait, Stikine Strait, Eastern Passage, and the Stikine River all converge in this area. Kadin Island rises fairly steeply and uniformly to a height just above 1,000 feet. Greys Island, which rises fairly gently to a height just above 400 feet, is slightly steeper on the northern side than the southern side. Both islands are heavily influenced by their location at the mouth of the Stikine River. High winds moving down the Stikine River canyon pick up fine sand and silt from the unvegetated glacial river floodplain and deposit it as loess on islands at the river's mouth, including Kadin and Greys Islands. There are no significant streams on the islands.

The islands are mostly unmodified. The natural integrity and apparent naturalness is considered to be outstanding. The opportunity for solitude and primitive recreation is low.

None of the roadless area is rated as distinctive for the character type from a visual perspective.

The unique soil associations found on both islands, the hydrology, and the occurrence of a unique form of high-productivity Sitka spruce/devil's club forest type are special values of this area. The islands have both cultural and historic values.

The roadless area includes about 1,614 acres of high-volume, old-growth forest. Of these acres, 207 are mapped as high-volume, coarse-canopy old growth.

The Kadin Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes up less than 1 percent of the province. It is one of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The Kadin Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents 0.1 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.

The Kadin Roadless Area lies completely within the Stikine River Delta Ecological Subsection and represents 5 percent of the ecological subsection. Approximately 77 percent of the Stikine River Delta Ecological Subsection is in existing wilderness and 5 percent is protected by other existing non-development LUDs.

The Kadin 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 considerable local and national support for management of the area in an unroaded condition, but very little support for designating the area as wilderness. Designation would create a very small wilderness that is mostly managed as a Research Natural Area, and could be managed with the nearby Stikine-LeConte Wilderness. 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 Kadin 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 research, recreation, and special use programs would continue. The values associated with the natural settings of the roadless area would be 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 ongoing research, 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. This would not affect timber sale projects because the roadless area is currently allocated to non-development LUDs. The ongoing research, recreation, and special uses programs may 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 225 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 2,022 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | 1,630 | 1,630 | 1,630 | 1,630 | 1,630 | | 1,630 | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | | | | | | | | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | | | | | | | | |
| Semi-remote Recreation | 392 | 392 | 392 | 392 | 392 | | 392 | |
| Recommended LUD II | | | | | | 2,022 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | | | | | | | | |
| TOTAL | 2,022 | 2,022 | 2,022 | 2,022 | 2,022 | 2,022 | 2,022 | 2,022 |
| Suitable Timber Lands | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** North Wrangell (227)

**ACRES (NFS):** 11,602

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 15 (17)

### I. Overview and Description

**(1) Location and Access:** The area is located on north Wrangell Island and bounded on all sides by land owned by the State, City of Wrangell, and private entities. This State, City, and private land forms a narrow buffer, less than 0.5 mile in some areas, between the roadless area and saltwater on the north, east, and west sides. The Tyee powerline bisects the area, dividing it into north and south subareas. The city of Wrangell is located about 0.5 mile northwest of the area. Zimovia Highway and Ishyama Road parallel the boundaries of the roadless area on the west and north, respectively. The Pat Creek Road (Forest Road 6259) parallels the area on the south and southeast. The state has plans to extend Ishyama Road further east along the northern boundary of the roadless area. The area is accessed by roads and trails. There are no sites suitable for landing wheeled aircraft. Access into the interior is by foot or helicopter.

**(2) History:** The area was used by the Stikine Tlingit in prehistoric times. However, only a few sites have been recorded. Tlingit sites in the general vicinity include a former camp and a possible burial site. Limited timber harvest has occurred along the northwestern and southeastern boundaries.

**(3) Geography and Topography:** This area, which forms the northern tip of Wrangell Island, is a mountain ridge with six somewhat rounded peaks ranging in elevation from 2,000 to over 2,600 feet. Short, steep drainages on both sides of the mountains contain small streams that empty into salt water. There is no saltwater shoreline in federal ownership and there are no ice and snow, alpine, or rock features mapped in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is generally subject to continental influence from the mainland and the Stikine River. Glacial flour is present in the marine environment in the northern part of this province nearly year round. All forest plant associations except those occurring only on outer coast areas are present.

Ecological Section/Subsection. The North Wrangell Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), Zimovia Strait Complex Ecological Subsection (see table below). Stratified sedimentary rock and volcanic intrusions lie beneath broad glacial valleys and rounded hills. Roughly half of the Zimovia Strait Complex Ecological Subsection includes mineral soils supporting productive hemlock forests with occasional stands of cedar or Sitka spruce (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Zimovia Strait Complex | 100% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in

organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry. More-poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Alpine vegetation dominates above 2,500 feet elevation. Poorly-drained areas between the peaks, and flatter areas on the ridge top are generally covered with muskeg and scrub lodgepole pine. Steeper, more-well-drained mountain sides support heavy stands of Sitka spruce, western hemlock, redcedar, and Alaska cedar.

There are approximately 11,411 acres mapped as forest land, of which 7,154 acres or 63 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 3,112 acres or 44 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 478 acres of high-volume, coarse-canopy old growth. There are approximately 60 acres of second-growth forest where timber harvest has occurred in the past.

**(d) Fish Resources:** Overall, fish habitat values in this landscape unit are the lowest on Wrangell Island. Coho salmon, cutthroat trout, and Dolly Varden char have been verified in several streams near the coastline, but there is little fish habitat within the roadless area.

**(e) Wildlife Resources:** Important species include Sitka black-tailed deer, wolves, black bear, pine marten, and a small population of moose.

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

| LUD | Acres |
|---|---|
| Scenic Viewshed | 7,785 |
| Old-growth Habitat | 3,408 |
| Municipal Watershed | 408 |

Much of the roadless area, approximately 67 percent, was allocated to one development LUD. This development LUD is the Scenic Viewshed LUD.

Approximately 33 percent of the roadless area was allocated to a non-development LUD (Old-growth Habitat, Municipal Watershed). A small area along the northeast boundary of the roadless area and an area along the southern boundary were allocated to the Old-growth Habitat LUD. The Old-growth Habitat LUD accounts for approximately 29 percent of the roadless area. Land west of the Old-growth Habitat LUD area in the north was allocated to the Municipal Watershed LUD, which accounts for approximately 4 percent of the roadless area. This LUD encompasses the headwaters of the Wrangell municipal water supply.

Eastern Passage, on the east, and Zimovia Strait, on the west, receive moderately-heavy use by commercial and pleasure boats. The shoreline surrounding this roadless area is in state, city, and private ownership. The western shoreline along the Zimovia Highway receives considerable recreation and other use.

Recreation use is high in the roadless area due to the proximity of Wrangell. Areas closely associated with the roads, especially where they cross the larger streams, receive higher use during the summer. The Rainbow Falls, Institute Creek, and North Wrangell Trail system is probably the most popular trail system on Wrangell Island (USDA Forest Service, 1998). There is considerable subsistence use in the area, primarily associated with deer hunting.

Timber harvest occurred in a narrow strip along the western border in 1965, in small partial-harvest patches just north of the Rainbow Falls Trail in 1997, and along the southeastern border in 1975-78. Four timber sales were proposed for the area in the 1998 Wrangell Island Analysis (USDA Forest Service, 1998). The Institute Timber Sale project area is located south of an existing timber harvest area (cut in 1965) on the west side of the roadless area. The Zimovia Timber Sale is located on the west side of the roadless area, just south of the Tyee powerline. The Back Channel and Doughnut timber sale areas are located on the east side of the area and were combined for analysis in the Doughnut Environmental Assessment (EA) (USDA Forest Service, 2000). The Doughnut timber sale is scheduled for sale in 2003. To access timber harvest in this area, road construction may be required from Zimovia Highway, Ishyama Road or Pat Creek Road.

**(6) Appearance (Apparent Naturalness):** Roads parallel the north, west, and south sides of the North Wrangell Roadless Area. The 138 kV Tyee powerline bisects the area. Timber harvest has occurred along the edges in several areas. The area also has several recreational developments, including a network of boardwalk trails, two observation platforms overlooking rainbow falls, and three 3-sided shelters. Slightly less than half of this roadless area (49 percent) is natural appearing, with only ecological change occurring.

**(7) Surroundings (External Influences):** State, city, and private lands border the area to the north, east, and southeast. These non-National Forest System lands are currently roaded, with some existing harvest units. The state and city are planning additional roading and harvest in these areas in the future. The Tyee powerline bisects the roadless area. Timber harvest has occurred along narrow strips of National Forest System lands and adjacent areas on the west and southeast sides of the area. The lands located west and northwest of the roadless area are also a mixture of state, city, and private lands. These lands are heavily developed with residences and roads. It is possible to see timber harvest areas and portions of the city of Wrangell from some locations within this roadless area. It is also possible to hear automobiles on the roads and other noises of the community from some locations.

Low-flying aircraft traveling to and from Wrangell may, at times, fly over the area. Boats using the waters of Eastern Passage and Zimovia Strait are visible from parts of the roadless area but are not usually intrusive.

**(8) Attractions and Features of Special Interest:** The area is accessible by road from Wrangell, which is considered an attraction by some. There are no special or unique features. The area contains six inventoried recreation places, which cover 9,022 acres, or 78 percent of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The roadless area boundaries have changed very little between 1989 and 2002. The 2002 version includes all National Forest System lands in this area, including unroaded harvested areas, which were left out of the 1989 version.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is bounded on all sides by a mixture of state, city, and private lands, with roads and timber management areas paralleling the north, west, and southeast boundaries. Timber harvest has also occurred along narrow strips of National Forest System lands on the west and southeast sides of the area. The Tyee powerline bisects the area. The area also has several recreational developments, including a network of boardwalk trails, two observation platforms overlooking rainbow falls, and three 3-sided shelters (Shoemaker Overlook, High Country, and Pond).

**(2) Opportunity for Solitude and Serenity, Self-Reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a low opportunity for solitude and serenity within the area. Present recreation use levels are low, except near the roads and along the trails. Generally, a person camped or traveling away from the roads is unlikely to see others.

Travel within the area is not especially challenging, requiring only moderate woods skills and experience. The presence of black bears presents a degree of challenge and a need for caution.

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) | 7,902 | 68% |
| Semi-Primitive Motorized (SPM) | 2,763 | 24% |
| Roaded Natural (RN) | 1 | 0% |
| Roaded Modified (RM) | 935 | 8% |

The area contains 6 inventoried recreation places, which cover 9,022 acres, or 78 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| SPNM | 1 | 7,902 |
| SPM | 2 | 424 |
| RN | 1 | <1 |
| RM | 4 | 694 |

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

There are three trails, three shelters, and the Rainbow Falls Observatories in the northern portion of the area. The trail system is used in the spring, summer, and fall for hiking, and in the winter for snowshoeing, cross-country skiing, and snowmobiling. The North Wrangell Trail will provide a loop trail from the Institute Creek Trail to the Spur Road extension (Ishyama Road) when it is completed in the near future. The character of the landforms and vegetation generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by automobile from the community of Wrangell in less than 0.5 hour.

**(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 North Wrangell Roadless Area was given a rating of 17 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. This rating reflects the effects of the surrounding developments and activities adjacent to and within the roadless area. A separate rating was done for the portion of the North Wrangell Roadless Area that is north of the powerline and it received a score of 17.

**(4) Ecologic and Geologic Values:** Poorly-drained areas between the peaks, and flatter areas on the ridge top are generally covered with muskeg and scrub lodgepole pine. Steeper, more-well-drained mountain sides support heavy stands of Sitka spruce, western hemlock, redcedar, and Alaska cedar. There are no known unique features in the 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.

This roadless area includes Institute and State Creek third order watersheds. These watersheds are sensitive to further development due to existing debris flows in Institute watershed, and steep slopes and high stream density in State Creek Watershed (USDA Forest Service, 1998). The high stream density of the State Creek Watershed offers efficient sediment transport to the short reach of fish habitat found at its mouth within state lands.

Overall, fish habitat values in this landscape unit are the lowest on Wrangell Island. Coho salmon, cutthroat trout, and Dolly Varden char have been verified in several streams near the coastline, but there is little fish habitat within the roadless area.

**(b) Wildlife Resources:** Important species include Sitka black-tailed deer, wolves, black bear, pine marten, and a small population of moose. The 1997 Forest Plan identifies high value marten habitat as high-volume, old-growth stands below 1,500 feet in elevation. Blocks of moderate marten habitat value occur along the beach and extend short distances into the North Wrangell Roadless Area (USDA Forest Service, 1998; 2000).

Eagle nest density is low. Northern goshawks are occasionally seen in the area in fall and winter (USDA Forest Service, 1998). Earlier analyses rated this area as moderate for wildlife.

Field review identified potential marbled murrelet nests, rough-skinned newts, willow ptarmigan, white-winged crossbills, black bear, and wolf use in the northern old-growth reserve. Several areas of high use and habitat value for deer were also observed in this area, which includes land within the adjacent Wrangell Municipal Watershed (USDA Forest Service, 2000).

The forested habitat in this area is believed to be important for north/south dispersal of wildlife species between the North Old-Growth Reserve, at the north end of the area, and the Pats Old-Growth Reserve, along the southeast border of the area. The importance of this area as a wildlife travel corridor will increase if adjacent State-owned lands are harvested.

**(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 North Wrangell 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 Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are no known karst, cave or other unique geologic resources in the area.

**(5) Scientific and Educational Values:** There are opportunities to observe and study fish and wildlife and the various forces that formed the landscape. The area is located approximately 1 mile south of the city of Wrangell and can be reached by road. This area is, therefore, very accessible to school-age children.

**(6) Scenic Values:** Much of this area provides spectacular views of the surrounding waters, other islands, and coastal mainland. Likewise, parts of the area are visible from small boat, ferry, and cruise ship routes around the north end of Wrangell Island. Parts of the area are visible from Eastern Passage and Zimovia Strait, travel routes along Alaska's Inside Passage mainly used by independent boaters and outfitters/guides and their clients. They are also occasionally used by small cruise ships and Alaska Marine Highway ferries as a secondary route between Wrangell and Ketchikan. The mountain ridges that forms the northern tip of the island dominates the visual landscape of this area, which is characterized by six somewhat rounded peaks and short, sharp drainages.

The entire area is inventoried as Variety Class B, which possesses landscape diversity that is common for the character type. Slightly less than half of this roadless area, 46 percent, has an Existing Visual Condition (EVC) Type I, with only ecological change occurring on the landscape. Two percent of the area appears to be untouched by human activity (EVC Type II). Nine percent of this roadless area is EVC Type III, where the average forest visitor notices changes in the landscape, but the natural appearance of the landscape remains dominant. Forty-four percent is 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:** The area is accessible by automobile from the community of Wrangell in less than 0.5 hour. The Rainbow Falls, Institute Creek, and North Wrangell Trail system is one of the

few trails easily accessible to a major population center on the ranger district and probably the most popular trail on Wrangell Island (USDA Forest Service, 1998).

There is considerable subsistence use adjacent to the area, primarily associated with roadside wood and berry gathering. The Wildlife Analysis Area that includes this roadless area accounted for 5 to 10 percent of annual average Wrangell deer harvest during 1987 to 1994. There is some subsistence use of the area. The VCUs in this area were not included among the highest value community use areas but were listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is bounded on all sides by a mixture of state, city, and private lands, with roads and timber harvest areas paralleling the north, west, and southeast boundaries. Timber management has also occurred along a narrow strip of National Forest System lands on the west side of the area. The Tyee powerline bisects the area and three shelters, two waterfall observatories, and extensive boardwalk trails exist in the northern portion of the area, making the suitability of the area for wilderness unlikely. The area is an irregular shape that broadly follows the outline of the coast, but is bounded by straight lines that form the boundaries between National Forest System lands and other land ownerships. These boundaries do not, for the most part, follow geographic or natural features and, except for several minor valleys, there is little physical screening from outside influences.

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

**(1) Recreation, Including Tourism Potential:** There is potential for additional development of a trail system, and cabins or shelters. The area's proximity to Wrangell suggests that there is more potential for use of the area by off-road vehicles and snowmobiles, cross-country skiing and hiking.

**(2) Subsistence Uses:** Most existing subsistence activities in the area would not be affected by wilderness designation or management in an unroaded condition.

**(3) Fish Resources:** No specific fish habitat enhancement projects are identified for this area in the Tongass Land Management Plan, amended winter 1985 to 1986.

**(4) Wildlife Resources:** As identified in the Tongass Land Management Plan, amended 1985 to 1986, moose and deer winter range habitat improvement projects are planned in the area. These projects typically consist of planting, thinning, and seeding.

**(5) Timber Resources:** There are approximately 7,154 acres mapped as productive old growth and 60 acres mapped as second growth due to timber harvest in the roadless area. Of this, 4,903 acres are defined as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 2,206 acres or 19 percent of this roadless area are estimated to be suitable for timber production. Approximately 882 of the suitable acres are mapped as high-volume old growth; of these acres, 116 are mapped as high-volume, coarse-canopy old growth.

The potential for timber management is high as a road system is already present nearby and could be extended into parts of this area and a camp would not be necessary. A site for transferring logs to saltwater and a sawmill are already present on Wrangell Island. Some parts of this area are highly prone to strong winds which blow down standing timber left exposed by cutting adjacent stands.

Four timber sales were proposed for the area in the 1998 Wrangell Island Analysis (USDA Forest Service, 1998). The Institute Timber Sale project area is located south of an existing clearcut and partial harvest area on the west side of the roadless area. The Zimovia Timber Sale is located on the west side of the roadless area, just south of the Tyee powerline. The Back Channel and Doughnut timber sale areas are located on the east side of the area and were combined for analysis in the Doughnut EA. The Doughnut EA with a Decision Notice was completed in June 2000 (USDA Forest Service, 2000) and it was scheduled for sale in 2002. To access timber harvest in this area, road construction may be required from Zimovia Highway, Ishyama Road or Pat Creek Road. Harvest activities could involve helicopter logging or a combination of road and helicopter logging.

**(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 area generally has a low minerals rating and there are no known current claims.

**(8) Transportation and Utilities:** The area is surrounded on three sides by existing roads and is bisected by the Tyee powerline corridor. There is potential for additional road construction for timber harvest.

**(9) Water Availability and Use:** The headwaters of Wrangell's municipal water supply are located in this roadless area. Many of the small watersheds in the area currently provide domestic water to private homes not connected to city water. City water lines are being extended on the west side of Wrangell Island, but it is expected that some homes will continue to use surface water originating from streams in the roadless area. Domestic water use is expected to increase with extension of the Spur Road (Ishyama Road) (USDA Forest Service, 1998).

**(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:** An area (400 acres) west of the northern Old-growth Habitat area was allocated to the Municipal Watershed LUD in the 1997 Tongass Land and Resource Management Plan. This area encompasses the headwaters of the Wrangell municipal water supply.

**(12) Land Status:** The State owns most of the land along the east side of the area, with the exception of some private land along the beach. The Tyee powerline corridor bisects the roadless area into north and south sections. The State also owns most of the lands adjacent to the south and west sides of the area. Other land surrounding the roadless area is owned by the city of Wrangell and private entities.

## IV. Wilderness Evaluation (Need for Wilderness)

### (1) Public and Congressional Interest

**(a) Interest Expressed by Local Users and Residents:** There have been no local initiatives or public sentiment expressed to have the area remain roadless. There has been interest by some residents of Wrangell in developing additional roads in the area to facilitate additional logging and roaded recreation opportunities (USDA Forest Service, 1990).

**(b) Congressional Interest:** In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness. The bill did not include this area. In 2001, HR 2908 did not propose this area for wilderness or as a Congressionally Designated LUD II area. It was proposed as a roaded area available for logging.

**(c) Public Input During Forest Plan Revision and Appeals:** No specific recommendations for wilderness were made. The Wrangell Resource Council recommended that the area be allocated to the Primitive Recreation LUD. Comments from the timber industry recommended that Management Area S25, which includes the North Wrangell Roadless Area, be allocated to the Timber Production LUD. Other timber industry comments recommended that with the exception of some Scenic Viewshed or Modified Landscape along the ferry route, all of Management Area S25 should be allocated to the Timber Production LUD to keep timber harvest economic in these already-developed areas.

**(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:** Public comments summarized for Wrangell Island in the Wrangell Island Analysis (USDA Forest Service, 1998) did not include a desire

by the public to have the area remain roadless or be designated wilderness. Many of the issues raised concerned recreation, with local residents citing the need for more hiking trails, winter recreation opportunities (snowmobiling and skiing), cabins and shelters on the island and recreational driving/camping opportunities. This summary suggested that local residents generally consider timber and recreation to be compatible on Wrangell Island, with people generally wanting to keep logging roads open for public use. The summary also noted an increasing concern about the cumulative effects of timber harvest, road building, and recreation development on wildlife habitat (USDA Forest Service, 1998).

Public comment received on the Doughnut Timber Sale EA covered a range of issues, with comments opposing new logging roads, clearcutting, and interference with streams. Others were concerned with recreation-related issues indicating that they would like to see a connection to the Wrangell East Road that would give young people an area to go snowmobiling, a link with the Pats Creek Road, and a loop road.

**(f) Public Input Expressed During Supplemental EIS Process:** The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 227 for permanent protection as LUD II. SEACC recommended the remaining roadless areas on Wrangell Island be designated LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The state lands along the Pat Creek Road separate this roadless area from a smaller roadless area (less than 5,000 acres) to the south. The south part of Wrangell Island consists of five roadless areas separated from one another by roads that follow drainages. Additional roadless areas are located nearby, across narrow saltwater channels, on Etolin Island and on the mainland. The nearest wilderness is the Stikine-LeConte, approximately 10 miles to the north. The South Etolin wilderness is located approximately 15 miles south of the North Wrangell Roadless Area. The area currently receives light to moderate use inland, away from saltwater or road access.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 70 | 100 |
| Wrangell (Pop. 2,308) | 1 | 1 |
| Petersburg (Pop. 3,224) | 35 | 35 |
| Juneau (Pop. 30,711) | 150 | 130 |

Wrangell is the nearest stop on the Alaska Marine Highway and is approximately 1 road mile from this area.

**(4) Relative Contribution to the National Wilderness Preservation System:** The North Wrangell Roadless Area is located on north Wrangell Island and bounded on all sides by land owned by the state, city of Wrangell, and private entities. This state, city, and private land forms a narrow buffer, less than 0.5 mile in some areas, between the roadless area and saltwater on the north, east, and west sides. The Tyee powerline bisects the area, dividing it into north and south subareas. The city of Wrangell is located about ½ mile northwest of the area. Zimovia Highway and Ishyama Road parallel the boundaries of the roadless area on the west and north, respectively. The Pat Creek Road (Forest Road 6259) parallels the area on the south and southeast. The state has plans to extend Ishyama Road further east along the northern boundary of the roadless area. This roadless area, which forms the northern tip of Wrangell Island, is a mountain ridge with six somewhat rounded peaks ranging in elevation from 2,000 to over 2,600 feet. Short, steep drainages on both sides of the mountains contain small streams that empty into salt water.

The area is mostly unmodified, but is heavily influenced by development and activities on nearby lands, and the powerline, which bisects the area. The area has high natural integrity and moderate apparent naturalness. The portion north of the powerline has high natural integrity and very high apparent naturalness when rated separately. The opportunity for solitude and primitive recreation is low for the roadless area.

None of the area is classified as distinctive for the character type from a visual perspective. There are no ecologic, geologic, scientific, or cultural features of significance in the roadless area.

The roadless area includes about 3,112 acres of high-volume, old-growth forest. Of these acres, 478 are mapped as high-volume, coarse-canopy old growth.

The North Wrangell Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes up about 2 percent of the province. It is 1 of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The North Wrangell Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents 0.5 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 North Wrangell Roadless Area lies completely within the Zimovia Strait Complex Ecological Subsection and represents 5 percent of the ecological subsection. Approximately 5 percent of the Zimovia Strait Complex Ecological Subsection is in existing wilderness and 26 percent is protected in other existing non-development LUDs.

The North Wrangell 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 3 other roadless areas) among the 109 Tongass inventoried roadless areas. The portion of the roadless area that is north of the powerline was rated separately and scored 17.

There is little support locally or nationally for managing this area in an unroaded condition or to be designated as wilderness. Designation would create a relatively small wilderness that is divided into two portions by a powerline, and that is heavily influenced by other developments and activities 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 North Wrangell Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, 6, or 7 is implemented. Approximately 33 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 67 percent. The land in the development LUDs provides an estimated 2,206 acres that are suitable for timber production (2 percent of the suitable acres on the Wrangell Ranger District). Approximately 116 of the suitable acres are classified as high-volume, coarse-canopy old growth. The timber sales, 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.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber sales would be allowed and the ongoing recreation, minerals, and special uses 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 receive long-term protection if designated wilderness.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 227 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 11,602 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | | | | | | | | |
| Enacted Municipal Watershed | 408 | 408 | 408 | 408 | 408 | 408 | 408 | |
| Old-growth Habitat | 3,408 | 3,408 | 3,408 | 3,408 | 3,408 | 3,408 | 3,408 | |
| Semi-remote Recreation | | | | | | | | |
| Recommended LUD II | | | | | | | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 7,785 | 7,785 | 7,785 | 7,785 | 7,785 | 7,785 | 7,785 | |
| Modified Landscape | | | | | | | | |
| Timber Production | | | | | | | | |
| **TOTAL** | **11,602** | **11,602** | **11,602** | **11,602** | **11,602** | **11,602** | **11,602** | **11,602** |
| Suitable Timber Lands | 2,206 | 2,206 | 2,206 | 2,206 | 2,206 | 2,206 | 2,206 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** South Wrangell (229)

**ACRES (NFS):** 14,959

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 20

### I. Overview and Description

**(1) Location and Access:** The area is located on the south end of Wrangell Island, approximately 20 air miles south of the city of Wrangell. Ernest Sound borders the south and part of the east side of the area. Fools Inlet also forms part of the east boundary. The area is bordered to the north, northeast, and northwest by forest roads and harvested areas. Zimovia Strait and lands selected by the state (Thoms Place State Marine Park) border the area to the west. The area is accessed from the surrounding saltwater via boat or floatplane and nearby forest roads, as well as via Thoms Place State Marine Park. There are no sites suitable for landing wheeled aircraft. Access into the interior is by foot or helicopter.

**(2) History:** The area was inhabited by the Tlingit in prehistoric and historic times. A former camp and a fort are believed to have been located on the east side of Southeast Cove (Goldschmidt and Haas, 1998). While the area has likely been prospected for minerals, there is only one known mining claim. No timber harvest has taken place within the area.

**(3) Geography and Topography:** The area is generally characterized by moderately-diverse, rounded to occasionally-blocky terrain, with mountains reaching elevations of over 2,000 feet. The tallest is approximately 2,155 feet in elevation. Southeast Cove divides the south portion of the area. Fools Inlet forms part of the area's east boundary. The area includes approximately 18 miles of saltwater shoreline. This area includes about 81 acres of islands and islets. There are no ice and snow, alpine or rock features mapped in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is generally subject to continental influence from the mainland and the Stikine River. All forest plant associations except those occurring only on outer coast areas are present.

Ecological Section/Subsection. The South Wrangell Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), Zimovia Strait Complex Ecological Subsection (see table below). Stratified sedimentary rock and volcanic intrusions lie beneath broad glacial valleys and rounded hills. Roughly half of the Zimovia Strait Complex Ecological Subsection includes mineral soils supporting productive hemlock forests with occasional stands of cedar or Sitka spruce (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Zimovia Strait Complex | 100% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Alpine vegetation generally dominates areas on Wrangell Island above 2,500 feet elevation. The valley floors and poorly-drained areas between hills are usually covered with muskeg and scrub lodgepole pine. Steeper, more-well-drained hillsides support heavy stands of Sitka spruce, western hemlock, redcedar, and Alaska-cedar.

There are approximately 14,692 acres mapped as forest land, of which 6,489 acres or 44 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 1,566 acres or 24 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 mapped second-growth forest where timber harvest has occurred in the past.

**(d) Fish Resources:** Southeast Cove is located in the south portion of this area. Several Class 1 and 2 streams run through the roadless area. Fish species on the island include steelhead, rainbow, and native cutthroat trout, Dolly Varden char, chum, pink, coho, and sockeye salmon (USDA Forest Service, 1998).

**(e) Wildlife Resources:** Important species include Sitka black-tailed deer, wolves, black bear, pine marten, and small populations of brown bear and moose.

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

| LUD | Acres |
|---|---|
| Timber Production | 13,299 |
| Scenic Viewshed | 1,231 |
| Old-growth Habitat | 348 |
| Semi-remote Recreation | 81 |

Approximately 97 percent of the roadless area was allocated to development LUDs (Timber Production, Scenic Viewshed). The majority of this roadless area, approximately 89 percent, was allocated to the Timber Production LUD. A small area located along Zimovia Strait on the west side of the area was allocated to the Scenic Viewshed LUD, which accounts for approximately 8 percent of the roadless area.

Approximately 3 percent of the roadless area was allocated to non-development LUDs (Old-growth Habitat, Semi-remote Recreation). Approximately 2 percent of the roadless area was allocated to Old-growth Habitat located primarily in the western part of the roadless area. Less than 1 percent was allocated to Semi-remote Recreation LUD.

Present recreation use levels are low except around Thoms Place, Fools Inlet, at streams and lakes near the roads, and occasionally at the mouths of some streams. The Wildlife Analysis Area that includes this roadless area accounted for 5 to 10 percent of annual average Wrangell deer harvest during 1987 to 1994.

This roadless area includes two timber sale project areas proposed in the 1998 Wrangell Island Analysis (USDA Forest Service, 1998). The Southeast Cove and Scattered Valley timber sale areas are located in the south and north portions of this roadless area, respectively. The current Tongass National Forest 10-year action plan schedules the Fools/Southeast Cove timber sale for 2011.

**(6) Appearance (Apparent Naturalness):** Overall, the area has high scenic quality with a natural appearing landscape and provides spectacular scenery from surrounding land and saltwater areas, including Zimovia Strait and Ernest Sound.

**(7) Surroundings (External Influence):** The area is located on the south end of Wrangell Island. Ernest Sound borders the south and part of the east side of the area. Fools Inlet also forms part of the east boundary. The area is bounded to the north, northeast, and northwest by forest roads and harvested areas. These developed areas separate the South Wrangell Roadless Area from adjacent roadless areas. Timber sales are planned for portions of the roadless areas north and east of the South Wrangell Roadless Area (USDA Forest Service, 2001). The State of Alaska has proposed upgrading and extending the Fools Inlet Road and constructing a new ferry terminal at Fools Inlet as part of the Southeast Alaska Transportation Plan. Zimovia Strait and lands owned by the state (Thoms Place State Marine Park) border the area to the west. Boats traveling the waters of Zimovia Strait and Ernest Sound may be visible from within parts of the area but usually are not intrusive. It is possible to see harvested areas from some locations within this roadless area.

**(8) Attractions and Features of Special Interest:** Southeast Cove offers a poorly protected anchorage and access to undeveloped recreation areas. Fools Inlet, which forms part of the area's east boundary, provides access to the Fools Inlet estuary, which is a popular waterfowl hunting spot. The area contains four inventoried recreation places, which cover 2,181 acres, or 15 percent of the roadless area. There are no improved trails in the area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The boundaries of this area have changed dramatically since 1989. Timber management activities between 1989 and 1996 divided the 1989 South Wrangell Roadless Area into five separate roadless areas.

## II. Capability of Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is essentially unmodified. Approximately 88 percent of the area is natural appearing, where only ecological and geological change has occurred.

**(2) Opportunity for Solitude, Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a moderate opportunity for solitude within the area, especially after one has gone a short distance from the roads. Present recreation use levels are low except around Thoms Place, Fools Inlet, at streams and lakes near the roads, and occasionally at the mouths of some streams. Generally, a person camped or traveling inland is likely to see others only occasionally.

Travel within the area is not especially challenging, requiring only moderate woods skills and experience. The presence of both black and brown bears, especially around salmon streams in the fall, does present a degree of challenge and a need for caution.

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) | 10,239 | 68% |
| Semi-Primitive Motorized (SPM) | 3,780 | 25% |
| Roaded Modified (RM) | 940 | 6% |

The area contains four inventoried recreation places, which cover 2,181 acres, or 15 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| SPNM | 0 | 0 |
| SPM | 3 | 1,594 |
| RM | 3 | 588 |

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

The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by road from the community of Wrangell in approximately 1 hour. It is accessible by boat from Wrangell in about 1-2 hours and from Ketchikan in approximately 7 hours. Thoms Place State Marine Park and Fools Inlet are adjacent to 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 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 South Wrangell Roadless Area, which was much larger at the time, was given a rating of 20 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 also given a rating of 20.

**(4) Ecologic and Geologic Values:** The majority of the roadless area is forested with areas of higher volume old-growth forest concentrated along the lower elevation areas. There are no known unique features in the area.

**(a) Fish Resources:** VCU 479 on the west coast was listed as a primary producer of sport fish and no VCUs were listed as primary producers of salmon (ADF&G, 1998).

Southeast Cove is located in the south portion of this area. Several Class 1 and 2 streams run through the roadless area. Fish species on the island include steelhead, rainbow, and native cutthroat trout, Dolly Varden char, chum, pink, coho, and sockeye salmon (USDA Forest Service, 1998).

**(b) Wildlife Resources:** Earlier analyses rated the Fools Landscape Unit, which includes part of the Southeast Wrangell Roadless Area, as moderate value for wildlife (USDA Forest Service, 1998). The area contains low value deer winter range. Important marten habitat occurs along the beach. Eagles, goshawks, and red-tailed hawks have been observed in the general area. The area is also used by black bear, wolves, and small populations of brown bear and moose.

**(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 observed in the general area. In addition, eight sensitive plant species are known or suspected to occur in the Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are no known karst and cave resources in the area.

**(5) Scientific and Educational Values:** There are opportunities to observe and study fish and wildlife and the various forces that formed the landscape. There are opportunities to observe and study historic and prehistoric cultural features along Zimovia Strait. A former camp and a fort are believed to have been located on the east side of Southeast Cove (Goldschmidt and Haas, 1998). The area is located approximately 1 hour by automobile from the city of Wrangell and is, therefore, relatively accessible to school-age children.

**(6) Scenic Values:** The majority of the area appears unmodified. The area is bordered to the north, northeast, and northwest by forest roads and harvested areas. These areas are visible from some parts of the roadless area. Overall, the area has high scenic quality with a natural appearing landscape and provides spectacular scenery from surrounding land and saltwater areas, including Zimovia Strait and Ernest Sound.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include Zimovia Strait and Ernest Sound, which are used by tour ships. The roads that border the area to the north, Fools Inlet (#6270) and Thoms Creek Crossing (#6299), are identified as Visual Priority Public Use Roads. Thoms Place, which forms part of the west boundary of the area, is identified as a State Marine Park, a Saltwater Use Area, and Boat Anchorage. Fools Inlet, which forms part of the area's east boundary, is also identified as a Saltwater Use Area and Boat Anchorage.

About 1 percent of the roadless area is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type). Most of the area, 99 percent, is inventoried as Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, 95 percent, has an Existing Visual Condition (EVC) Type I, where only ecological change has occurred on the landscape. One percent of this roadless area is EVC Type III, where changes in the landscape are noticed by the average forest visitor. The natural appearance of the landscape remains dominant. About 2 percent of the area is in EVC Type IV, where changes in the landscape are easily noticed by the average person and may attract some attention. Two 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.

**(7) Social, Cultural, and Historical Values:** The area was inhabited by the Tlingit in prehistoric and historic times. A former camp and a fort are believed to have been located on the east side of Southeast Cove (Goldschmidt and Haas, 1998). While the area has likely been prospected for minerals, there is only one known mining claim. The area is accessible by boat and automobile from the community of Wrangell. Present recreation use levels are low within the roadless area, with more use in adjacent areas around Thoms Place, Fools Inlet, at streams and lakes near roads, and occasionally at the mouths of some streams.

The Wildlife Analysis Area that includes this roadless area accounted for 5 to 10 percent of annual average Wrangell deer harvest during 1987 to 1994. The VCUs in this area were not included among the VCUs with highest community use value but were listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The southern portion of the area is generally well defined by saltwater on the east, west, and south. Unroaded lands owned by the state (Thoms Place State Marine Park) partially border the area to the west. The area is bordered to the north, northeast, and northwest by forest roads and harvested areas. It is possible to see harvested areas from some locations within this roadless area. However, the boundaries along these developed areas are well placed and manageability of this area as wilderness would be higher than any other Wrangell Island roadless area. The roads that border the north portion of the area provide road access to the edge of the area. Access would also be possible from saltwater, as well as via Thoms Place State Marine Park.

South Wrangell Island, which includes the South Wrangell Roadless Area, as well as four other roadless areas, was mainly allocated to the Timber Production and Old-growth Habitat LUDs, with relatively small areas allocated to the Scenic Viewshed LUD. The areas located across Zimovia Strait and Ernest Sound from the South Wrangell Roadless Area were primarily allocated to the Scenic Viewshed and Old-growth Habitat LUDs in the 1997 Tongass Land and Resource Management Plan. These allocations suggest that these areas would appear natural when viewed from the South Wrangell Roadless Area.

The manageability of the area as wilderness could be affected if the State of Alaska goes ahead with its plan to build a new ferry terminal and 3 new miles of road on the west side of Fools Inlet near the roadless area.

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

**(1) Recreation, Including Tourism Potential:** There is potential for outfitter and guide permits and for developed trails and cabins or shelters in 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:** No fish habitat enhancement projects have been identified for this area. There is an existing natural fish barrier located north of Southeast Cove.

**(4) Wildlife Resources:** As identified in the Tongass Land and Resource Management Plan, amended 1985-1986, moose and winter range habitat improvement projects are planned in the area. These projects typically consist of browse enhancement involving seeding, planting, and releasing.

**(5) Timber Resources:** There are approximately 6,489 acres mapped as productive old growth in the roadless area. There is no mapped second growth due to timber harvest. Of these acres, 4,171 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), 1,935 acres or 13 percent of this roadless area are estimated to be suitable for timber production. Approximately 333 of the suitable acres are mapped as high-volume old growth; none of the acres are mapped as high-volume, coarse-canopy old growth.

Some areas are highly prone to strong winds which blow down standing timber left exposed by cutting adjacent stands. The potential for managing timber in this roadless area is high, as roads could be extended from the existing system and the area could be logged without constructing a camp or additional log transfer facilities.

This roadless area includes two timber sale project areas proposed in the 1998 Wrangell Island Analysis (USDA Forest Service, 1998). The Southeast Cove and Scattered Valley timber sale areas are located in the south and north portions of this roadless area, respectively.

The Tongass National Forest's 10-Year Action Plan identified a proposed Fools/Southeast Cove timber sale EIS in 2009 for 15 MMBF with harvest projected for 2011. Most of this proposed sale would be in a 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:** The area generally has a low minerals rating and there is only one known current claim along the beach of Southeast Cove.

**(8) Transportation and Utilities:** The March 1999 Southeast Alaska Transportation Plan proposed implementation of a new shuttle-ferry and road system, referred to as the *Inside Passage Highway*, connecting Petersburg, Wrangell, and Ketchikan. This plan would be accomplished by using a combination of new ferry terminals and upgraded road segments and a fast-ferry route between South Wrangell Island and Ketchikan. Proposed road improvements on Wrangell Island include upgrading Forest Road 6265 and Fools Inlet Road, as well as constructing 3 miles of new roadway to a new ferry terminal at Fools Inlet. A final terminal location was not identified in the plan. However, the maps accompanying the plan show the potential location of the terminal and the 3 miles of new road on the west side of the inlet, near or just within the boundaries of the South Wrangell Roadless Area (State of Alaska, Department of Transportation and Public Utilities, 1999).

**(9) Water Availability and Use:** There are no existing or planned hydropower or domestic water projects in the area.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas, and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** No special uses are authorized in this area.

**(12) Land Status:** The entire area is National Forest System land. Encumbered land within the area is located in the west, adjacent to State land.

## IV. Wilderness Evaluation (Need for Wilderness)

### (1) Public and Congressional Interest

**(a) Interest Expressed by Local Users and Residents:** There have been no local initiatives or public sentiment expressed to have the area remain roadless. There has been interest by some residents of Wrangell in developing additional roads in the unroaded portions of Wrangell Island to facilitate additional logging and roaded recreation opportunities (USDA Forest Service, 1990).

**(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 Wrangell Roadless 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. The roaded area between the Central Wrangell and South Wrangell Roadless Areas was also proposed as a Restoration Area.

**(c) Public Input During Forest Plan Revision and Appeals:** No specific recommendations for wilderness were made. One party did, however, propose that Southeast Cove be designated LUD II to protect the anchorage and undeveloped recreation areas. The Southeast Alaska Conservation Council included South Wrangell Island in their 1991 list of areas that merited special management protection because of their outstanding wildlife, fisheries, hunting, fishing, subsistence, recreation and tourism values.

The Wrangell Resource Council recommended that Wrangell Island be allocated to the Primitive Recreation LUD. Timber industry comments recommended that Management Area S25, which includes the South Wrangell Roadless Area, be allocated to the Timber Production LUD. Other timber industry comments recommended that, with the exception of some Scenic Viewshed or Modified Landscape areas along the ferry route, all of Management Area S25 should be allocated to the Timber Production LUD to keep timber harvest economic in these already-developed areas.

**(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 summary of public comments presented in the Wrangell Island Analysis (USDA Forest Service, 1998) did not include a desire by the public to have the area remain roadless or be designated wilderness. Many of the issues raised concerned recreation, with local residents citing the need for more hiking trails, winter recreation opportunities (snowmobiling and skiing), cabins and shelters on the island and recreational driving/camping opportunities. Some people would like to have primitive campsites designated near beaches around the island. This summary suggested that local residents generally consider timber and recreation to be compatible on Wrangell Island, with people generally wanting to keep logging roads open for public use. The summary also noted an increasing concern about the cumulative effects of timber harvest, road building, and recreation development on wildlife habitat (USDA Forest Service, 1998). The summary noted that the Fools Inlet area is routinely cited for its high wildlife values.

**(f) Public Input Expressed During Supplemental SEIS Process:** SEACC recommended the remaining roadless areas on Wrangell Island be designated LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 229 for permanent protection as LUD II

**(2) Nearby Roadless and Wilderness Areas and Uses:** There are four other roadless areas on south Wrangell Island, separated from the South Wrangell Roadless Area by roads. Present recreation use levels are low except around Fools Inlet, at streams and lakes near the roads, and occasionally at the mouths of some streams. Subsistence use in the Wildlife Analysis Area that includes South Wrangell Island accounted for 5 to 10 percent of average annual deer harvest from 1987 to 1994. The nearest Wilderness is the South Etolin Island Wilderness located about 6 miles to the southwest. The Stikine-LeConte wilderness is located approximately 12 miles north of the South Wrangell Roadless Area.

Road improvements, proposed for Wrangell Island in the March 1999 Southeast Alaska Transportation Plan, include construction of 3 miles of new roadway to a new ferry terminal at Fools Inlet. These new developments are potentially within the boundaries of the South Wrangell Roadless Area

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 50 | 70 |
| Wrangell (Pop. 2,308) | 20 | 25 |
| Petersburg (Pop. 3,224) | 55 | 60 |
| Juneau (Pop. 30,711) | 170 | 175 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The South Wrangell Roadless Area is located on the south end of Wrangell Island, approximately 20 air miles south of the city of Wrangell. Ernest Sound borders the south and part of the east side of the area. Fools Inlet also forms part of the east boundary. The area is bordered to the north, northeast, and northwest by forest roads and harvested areas. Zimovia Strait and State lands (Thoms Place State Marine Park) border the area to the west. The roadless area is generally characterized by moderately-diverse, rounded to occasionally-blocky terrain, with mountains reaching elevations of over 2,000 feet. The tallest is approximately 2,155 feet in elevation. Southeast Cove divides the south portion of the area. Fools Inlet forms part of the area's east boundary.

The area is mostly unmodified except for the influence of developed areas on the north side of the roadless area. The natural integrity and apparent naturalness is very high for the area. The opportunity for solitude and primitive recreation is moderate.

Approximately 1 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The area has no other ecologic, geologic, scientific or cultural features of particular significance.

The roadless area includes about 1,566 acres of high-volume, old-growth forest. None of these acres are mapped as high-volume, coarse-canopy old growth.

The South Wrangell Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes up about 3 percent of the province. It is one of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The South Wrangell 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.

The South Wrangell Roadless Area lies completely within the Zimovia Strait Complex Ecological Subsection and represents 7 percent of the ecological subsection. Approximately 5 percent of the Zimovia Strait Complex Ecological Subsection is in existing wilderness and 26 percent is protected in other existing non-development LUDs.

The South Wrangell 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 management of the area in an unroaded condition, and little support for designation of the area as wilderness. Designation would create a wilderness that has few features that are considered unique or significant from a wilderness perspective. A potential location of a new ferry terminal and 3 miles of new road on the west side of the inlet, near or just within the boundaries of the South Wrangell Roadless Area, are being considered by the State as part of improving transportation linkages with other communities of Southeast Alaska. 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 South Wrangell Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 3 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 97 percent. The land in the development LUDs provides an estimated 1,935 acres that are suitable for timber production (2 percent of the suitable acres on the Wrangell Ranger District). No acres are mapped as high-volume, coarse-canopy old growth. The timber sales, 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.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. No timber harvest would be allowed. The values associated with the natural settings of the roadless area would receive long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses 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 receive long-term protection if designated wilderness.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 229 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 14,959 |
| 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 | 348 | 348 | 348 | 348 | 348 | | 348 | |
| Semi-remote Recreation | 81 | 81 | 81 | 81 | 81 | | 81 | |
| Recommended LUD II | | | | | | 14,959 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 1,231 | 1,231 | 1,231 | 1,231 | 1,231 | | 1,231 | |
| Modified Landscape | | | | | | | | |
| Timber Production | 13,299 | 13,299 | 13,299 | 13,299 | 13,299 | | 13,299 | |
| **TOTAL** | **14,959** | **14,959** | **14,959** | **14,959** | **14,959** | **14,959** | **14,959** | **14,959** |
| Suitable Timber Lands | 1,935 | 1,935 | 1,935 | 1,935 | 1,935 | 0 | 1,935 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Woronkofski (231)

**ACRES (NFS):** 12,932

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 20

### I. Overview and Description

**(1) Location and Access:** The area is located on Woronkofski Island, which is bounded by Stikine Strait on the west, Zimovia Strait on the east, Sumner Strait to the north, and Chichagof Pass to the south. The city of Wrangell lies approximately 5 miles to the northeast, and is served by the Alaska Marine Highway and jet service. The roadless area encompasses the entire island with the exception of areas on the northwest and northeast sides of the island. Harvest activities and road building have occurred along the two major drainage channels on the northwest side of the island. An electric transmission line runs along the northeast shoreline of the island. Both of these areas are excluded from the roadless area. There are no sites on the roadless area suitable for landing wheeled aircraft. A small road system that is overgrown with alder exists on the island. The island is accessible from saltwater by boat or floatplane and several moorage sites exist. The logging roads on the northwest side of the island lead close to the boundaries of the roadless area, but they are inaccessible to all but foot traffic.

**(2) History:** The island was apparently used by several groups of the Stikine Tlingit as a hunting and fishing area. Hunting and/or trapping occurred on the north and south sides of the island, with shellfishing taking place in Circle Bay (Goldschmidt and Haas, 1998). They harvested deer, salmon, clams, seaweed, cockles, and mussels. Tlingit fort sites are believed to have been located on the north and south ends of the island. A cemetery is believed to have been located on the west side of the island (Goldschmidt and Haas, 1998). Several gold mine claims were made in 1900 at Paradise Cove and in Sunrise Cove near Elephants Nose, a prominent rocky feature on the north side of the island at the edge of the roadless area. Beach logging has occurred at a number of sites around the island, timber harvest and road development took place in the two drainages (Sunrise Creek and Ancon Creek) on the northwest side of the island in the 1960s, and the Tyee powerline was built along the north and northeast sides of the island in 1983.

**(3) Geography and Topography:** The area is generally characterized by steeply rising mountains reaching elevations of over 2,000 feet. The tallest, Mount Woronkofski, is over 3,200 feet in elevation. Also included in this area is about 163 acres in alpine. Two drainages originating in glacial cirques flow to the north. Freshwater lakes, including Sunrise Lake, centrally located within the northern portion of the island, make up about 55 acres. Elephants Nose is a prominent rocky feature on the north side of the area. The roadless area includes approximately 19 miles of saltwater shoreline. There are no ice or rock features mapped in this area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is generally subject to continental influence from the mainland and the Stikine River. Glacial flour is present in the marine environment in the northern part of this province nearly year round. All forest plant associations except those occurring only on outer coast areas are present. There are no unique or uncommon plant/soil associations or geologic formations in the area.

Ecological Section/Subsection. The Woronkofski Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), Zimovia Strait Complex Ecological Subsection (see table below). Stratified sedimentary rock and volcanic intrusions lie beneath broad glacial valleys and rounded hills. Roughly half of the Zimovia Strait Complex Ecological Subsection includes mineral soils supporting productive hemlock forests with occasional stands of cedar or Sitka spruce (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Zimovia Strait Complex | 100% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Alpine vegetation (mapped as 163 acres) dominates above 2,500 feet elevation. The valley floors and poorly-drained areas between hills are generally covered with muskeg and scrub lodgepole pine. Steeper, more-well-drained hillsides support heavy stands of Sitka spruce, western hemlock, redcedar, and Alaska cedar.

There are approximately 12,277 acres mapped as forest land, of which 6,628 acres or 54 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 3,476 acres or 52 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 648 acres of high-volume, coarse-canopy old growth. There are approximately 586 acres of second-growth forest where beach logging has occurred.

**(d) Fish Resources:** Coho salmon are thought to rear along the northeast shore of the island while pink and chum use the estuary along the south shore. Only a few short streams occur on the island. The Anadromous Waters Catalogue and Atlas (Alaska Department of Fish and Game [ADF&G], 1998) shows one unnamed stream as providing habitat for coho salmon. In general, the fish habitat on the island is low to moderate value from a regional perspective. Stikine River king salmon school in saltwater along the northwest shore in the spring.

**(e) Wildlife Resources:** Important species in this area include Sitka black-tailed deer and black bear.

**(f) Threatened, Endangered, and Sensitive Species:** The area contains no known threatened, endangered, or sensitive species.

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

| LUD | Acres |
|---|---|
| Scenic Viewshed | 11,567 |
| Old-growth Habitat | 1,365 |

The majority of this roadless area, approximately 89 percent, was allocated to one development LUD. Scenic Viewshed is this widely allocated development LUD.

Approximately 11 percent of the area was allocated to one non-development LUD, Old-growth Habitat. This LUD is located in a small area on the south side of the island

Harvest activities and road building have occurred along Sunrise Creek and Ancon Creek, the two major drainage channels on the northwest side of the island. The powerline from the Tyee hydroelectric project runs along the northeast shoreline of the island, as it connects Wrangell and Petersburg. The City of Wrangell was permitted to install and monitor stream gauges for investigation of a hydroelectric and drinking water project using Sunrise Lake as the water source. The city holds a preliminary permit from the Federal Energy Regulatory Commission (FERC) for the potential hydroelectric project. A-frame style beach logging occurred in the 1960s in areas on the northwest and southeast sides of the island.

The saltwater bodies surrounding the island receive moderately-heavy use by commercial and pleasure boats. The Alaska Marine Highway passes within one-half mile along the west and north sides of the roadless area. The shoreline receives moderate recreation use. There has been considerable subsistence use in the area. This roadless area accounted for greater than 15 percent of average annual Wrangell deer harvest between 1987 and 1994.

**(6) Appearance (Apparent Naturalness):** Overall, the area has high scenic quality with a natural appearing landscape and provides spectacular scenery from the surrounding saltwater areas. Harvest areas are located on the northeast, northwest, and southeast sides of the area and it is possible to see harvested areas, roads, and the transmission line from some locations within the area and from some marine locations. It is also possible to see some developments on Wrangell Island in the distance, from the northeast side of the island.

**(7) Surroundings:** The area is located on Woronkofski Island. Sights and sounds from the city of Wrangell are also apparent from some locations. Boats plying the adjacent saltwater may be visible from within parts of the area, but usually are not intrusive. The Alaska Marine Highway passes within one-half mile along the west and north sides of the roadless area. A Transportation and Utility System LUD is located along the northeast edge of the island and coincides with the existing utility corridor there.

**(8) Attractions and Features of Special Interest:** Elephants Nose is a prominent rocky feature on the north end of the island at the edge of the roadless area. There are three small subalpine lakes, including Sunrise Lake. Saltwater fishing is popular off the northern portion of the island. The area contains six inventoried recreation places, which cover 2,129 acres, or 16 percent of the roadless area. There are no improved trails in the area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The 2003 roadless area boundary excludes those areas of Woronkofski Island where development and road-related timber harvest has occurred. The same general areas were excluded from the 1989 roadless area. However, the boundaries of these excluded areas are more closely defined in the 2003 area. Areas on the northwest and southeast sides of the island that have been beach logged were excluded from the 1989 Woronkofski Roadless Area. These areas are within the revised 2003 boundaries.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The majority of this roadless area (85 percent) is natural appearing, where only ecological and geological change has occurred. However, harvest activities and road building have occurred within the two largest drainages on the northwest side of the island and the Tyee powerline was constructed along the northeast shore of the island. Although these areas are excluded from the Woronkofski Roadless Area, they both affect it. The core of the island is the roadless area, but the roads that follow Sunrise Creek and Ancon Creek on the northwest side of the island extend into this core. Beach logging has occurred in areas on the northwest and southeast sides of the island. In other portions of this roadless area, natural integrity and apparent naturalness is high.

**(2) Opportunity for Solitude, Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a moderate opportunity for solitude and primitive recreation within the area, especially after one has gone a short distance inland from the shoreline. The character of the area generally allows the visitor to feel

remote from the sights and sounds of human activity. Present recreation use levels are low except at the mouths of some streams. Generally, a person camped or traveling inland is likely to only occasionally see others.

Travel within the area is not especially challenging, requiring only moderate woods skills and experience. The presence of black bears, especially around salmon streams in the fall, does present a degree of challenge and a need for caution.

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) | 3,140 | 24% |
| Semi-Primitive Motorized (SPM) | 7,590 | 59% |
| Roaded Modified (RM) | 2,202 | 17% |

The area contains six inventoried recreation places, which cover 2,129 acres, or 16 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| SPNM | 0 | 0 |
| SPM | 3 | 1,356 |
| RM | 4 | 773 |

* 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 is accessible by boat from the community of Wrangell in less than one-half hour and from Ketchikan in approximately 7 hours. Visitors from Wrangell sometimes access portions of the roadless area by foot.

**(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 Woronkofski 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 20. This rating reflects the current degree of development and ongoing activities, and their effects on the attributes of the area.

**(4) Ecologic and Geologic Values:** The majority of the roadless area is forested, with areas of old growth concentrated in lower elevation areas around the perimeter. The area encompasses all of Woronkofski Island with the exception of two relatively small areas on the northwest and northeast sides of the island.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) does not identify this VCU as a primary salmon or sport fish producer.

Coho salmon are thought to rear along the northeast shore of the island while pink and chum use the estuary along the south shore. Only a few short streams occur on the island. The Anadromous Waters Catalogue and Atlas (ADF&G, 1998) shows one unnamed stream as providing habitat for coho salmon. In general, the fish habitat on the island is low to moderate value from a regional perspective. Stikine River king salmon school in saltwater along the northwest shore in the spring.

**(b) Wildlife Resources:** Important species in this area include Sitka black-tailed deer and black bear. Other species include river otter, marten, beaver, bald eagle, and marbled murrelets. High volume old-growth habitats occur near the shoreline, particularly along the southeast shore.

**(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 Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** Elephants Nose is a prominent rocky feature on the northern end of the island. There are no known karst and cave resources in the area.

**(5) Scientific and Educational Values:** There are opportunities to observe and study wildlife. The area is relatively close to Wrangell (accessible by boat in less than 0.5 hour) and, therefore, is relatively accessible to school-age children.

**(6) Scenic Values:** The roadless area itself, is unmodified. Harvest areas are located on the northeast, northwest, and southeast sides of the area and it is possible to see harvested areas, roads, and the transmission line from some locations within the area. A person in a boat approaching the roadless area would see a combination of managed and natural scenery.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include Stikine Strait, which is part of the Alaska Marine Highway and is also used by tour ships and Zimovia Strait and Chichagof Pass, which are both used by tour ships.

About 17 percent of this roadless area is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type), and 83 percent is inventoried as Variety Class B (possessing landscape diversity that is common for the character type).

Much of the roadless area, 67 percent, has an Existing Visual Condition EVC Type I, where only ecological change has occurred on the landscape. Five percent of this roadless area is EVC Type III, where changes in the landscape are noticed by the average forest visitor, but the natural appearance of the landscape remains dominant. Twelve 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. About 15 percent of the area has an 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 area is located approximately 5 miles southwest of Wrangell, which is the closest community. Wrangell is also the closest stop on the Alaska Marine Highway; Alaska State ferries pass within 1 mile of the west and north sides of the roadless area. The area contains six inventoried recreation places and is accessible by boat from Wrangell in less than one-half hour.

The island was apparently used by several groups of the Stikine Tlingit as a hunting and fishing area. They harvested deer, salmon, clams, seaweed, cockles, and mussels. Tlingit fort sites are believed to have been located on the north and south ends of the island. There was also a cemetery located near the shore on the southwest part of the island. Woronkofski Island accounted for more than 15 percent of Wrangell's annual average total deer harvest during 1987 to 1994, though deer harvest has greatly decreased on the island since 1994. This VCU (461) was not listed among the VCUs with highest community use value but was listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The Woronkofski Roadless Area is generally defined by saltwater. However, a roaded area and the Tyee powerline separate the roadless area from the shore along the northwest and northeast, respectively. Road construction and related harvest activities have occurred along two drainages on the northwest side of the island. As a result, this roadless area is irregularly shaped with the harvest units that follow the drainage channels extending a short distance into the core of the area. Manageability as wilderness is moderate.

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

**(1) Recreation, Including Tourism Potential:** There is potential for additional outfitter and guide permits, developed trails, and cabins or shelters. This area, located less than 5 miles southwest of Wrangell, is relatively accessible by boat. As a result, there is also potential for use of off-road vehicles and snowmobiles if road systems were re-opened. The 1997 Stikine Area Recreation Use Carrying Capacity Report identified three recreation places in this roadless area with a combined total capacity of 168 net recreation visitor days (RVDs) for a managed season of use.

**(2) Subsistence Uses:** The existing patterns of subsistence activities in the area would generally not be affected by wilderness designation or management in an unroaded condition.

**(3) Fish Resources:** No fish habitat enhancement projects have been identified for this area.

**(4) Wildlife Resources:** As identified in the Tongass Land and Resource Management Plan, amended 1985 to 1986, habitat improvement projects are planned in the area. These projects typically consist of thinning and planting.

**(5) Timber Resources:** There are approximately 6,628 acres mapped as productive old growth and 586 acres mapped as second growth due to harvest in the roadless area. Of these acres, 5,827 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), 2,216 acres or 17 percent of this roadless area are estimated to be suitable for timber production. Approximately 1,154 of the suitable acres are mapped as high-volume old growth; of these acres, 254 are mapped as high-volume, coarse-canopy old growth.

The Tongass National Forest 10-year action plan identifies a timber sale project on Woronkofski Island in 2005. The potential for managing timber in this roadless area is high. Roads could be extended from the existing system. However, a new log transfer facility would need to be constructed. There currently are no log transfer facilities on Woronkofski Island. Much of the area could be logged without constructing additional roads, by using helicopters and barges. Approximately 95 percent of this proposed sale would be in the roadless area.

**(6) Fire, Insects, and Disease:** The area has one stand on the southern shore of the island along Chichagof Pass that appears to be a fire-generated stand. Endemic tree diseases common to Southeast Alaska are present; there are no known epidemic disease occurrences.

**(7) Minerals:** The area generally has a low minerals rating and there are no known current claims. Several gold mine claims were made in 1900 in Sunrise Cove and Paradise Cove.

**(8) Transportation and Utilities:** There are no proposed transportation corridors within or adjacent to the area. The Tyee powerline was built along the north and northeast sides of the island in 1983.

**(9) Water Availability and Use:** There are no developed recreation or other facilities located in this area. As a result, there is no demand for water for domestic use. The City of Wrangell was permitted to install and monitor stream gauges for investigation of a hydroelectric and drinking water project using Sunrise Lake as the water source. The city holds a preliminary permit from FERC for the potential hydroelectric project and an Initial Scoping Document has been issued. Data collection continues, but plans for development are on hold.

**(10) Areas of Scientific Interest:** The area does not contain any Research Natural Areas, and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** The City of Wrangell has a special use permit to conduct hydrologic monitoring for a potential hydroelectric and drinking water project. A special use authorization exists for the Tyee Powerline, adjacent to the roadless area. Two lighthouse reservations exist; one is within the roadless area and one is in the roaded portion near the powerline.

**(12) Land Status:** The entire roadless area, including adjacent lands on the island, are National Forest System lands.

## IV. Wilderness Evaluation (Need for Wilderness)

### (1) Public and Congressional Interest

**(a) Interest Expressed by Local Users and Residents:** Most of the area use is by residents of Wrangell for recreation purposes. There has been no formal support for or opposition to maintaining this area in a roadless or wilderness condition.

**(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 Woronkofski Roadless 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. The National Audubon Society and the Tongass Conservation Society identified Woronkofski Island as an important deer hunting area for Wrangell residents and requested that timber sales in Wildlife Analysis Area 1904 (Woronkofski and neighboring islands) be deferred indefinitely. These groups recommended that the area be allocated to primitive recreation.

Timber interests commented that, with the exception of some Scenic Viewshed or Modified Landscape areas along the ferry route, the area should be in timber production because harvest is more economical in already-developed areas.

Another commenting party recommended that the hydroelectric site at Sunrise Lake be allocated 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:** 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 the remaining unlogged portions of Woronkofski, Zarembo, and North Etolin Islands be safeguarded through LUD II protection. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 231 for permanent protection as LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The roadless area encompasses the entire island with the exception of areas on the northwest and northeast sides of the island. Harvest activities and road building have occurred along Sunrise and Ancon Creeks on the northwest side of the island. The Tyee powerline runs along the northeast shoreline of the island. The closest roadless area is the North Etolin Island Roadless Area, located to the south across Chichagof Pass from the Woronkofski Roadless Area. Roadless areas to the east and west are separated from the Woronkofski Roadless Area by water channels and areas of shoreline development. The nearest wildernesses are the Stikine-LeConte Wilderness, approximately 10 miles to the north, and the South Etolin Island Wilderness, approximately 15 miles to the south.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 70 | 95 |
| Wrangell (Pop. 2,308) | 5 | 5 |
| Petersburg (Pop. 3,224) | 30 | 35 |
| Juneau (Pop. 30,711) | 150 | 155 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Woronkofski Roadless Area is located on Woronkofski Island, which is bounded by Stikine Strait on the west, Zimovia Strait on the east, Sumner Strait to the north, and Chichagof Pass to the south. The roadless area is generally characterized by steeply rising mountains reaching elevations of over 2,000 feet; the tallest is over 3,000 feet.

The area is mostly unmodified; however, it is influenced by developments, including the Tyee powerline, in adjacent areas. The natural integrity and apparent naturalness is very high for the area. The opportunity for solitude and primitive recreation is moderate.

Approximately 17 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The area has high cultural and historic values.

The roadless area includes about 3,476 acres of high-volume, old-growth forest. Of these acres, 648 are mapped as high-volume, coarse-canopy old growth.

The Woronkofski Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes up about 2 percent of the province. It is one of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The Woronkofski Roadless Area lies completely within the Inside Passage Fjordlands Ecological Section and represents less than 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.

The Woronkofski Roadless Area lies completely within the Zimovia Strait Complex Ecological Subsection and represents 6 percent of the ecological subsection. Approximately 5 percent of the Zimovia Strait Complex Ecological Subsection is in existing wilderness and 26 percent is protected in other existing non-development LUDs.

The Woronkofski 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 management of the area in an unroaded condition, and little support for designation of the area as wilderness. Designation would create a wilderness that encompasses most of an island and other portions that are quite scenic. It would also include Sunrise Lake at which the City of Wrangell is

considering for hydroelectric generation. 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 Woronkofski Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 11 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 89 percent. The land in the development LUDs provides an estimated 2,216 acres that are suitable for timber production (2 percent of the suitable acres on the Wrangell Ranger District). Approximately 254 of the suitable acres are classified as high-volume, coarse-canopy old growth. The planning for the City of Wrangell hydroelectric project at Sunrise Lake would continue. The timber sales, recreation, minerals, and special use programs would continue. The high cultural, historic and most of the scenic values of the roadless area are protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, hydroelectric, minerals, and special use 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 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. No timber harvest would be allowed and the ongoing recreation, hydroelectric, minerals, and special uses 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, including the cultural, 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 231 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 12,932 |
| 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 | 1,365 | 1,365 | 1,365 | 1,365 | 1,365 | | 1,365 | |
| Semi-remote Recreation | | | | | | | | |
| Recommended LUD II | | | | | | 12,932 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 11,567 | 11,567 | 11,567 | 11,567 | 11,567 | | 11,567 | |
| Modified Landscape | | | | | | | | |
| Timber Production | | | | | | | | |
| **TOTAL** | **12,932** | **12,932** | **12,932** | **12,932** | **12,932** | **12,932** | **12,932** | **12,932** |
| Suitable Timber Lands | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 0 | 2,216 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** North Etolin (232)

**ACRES (NFS):** 41,740

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 18 (20)

### I. Overview and Description

**(1) Location and Access:** The area is located on the north end of Etolin Island and is bounded by Chichagof Pass to the north, Stikine Strait on the northwest, and Zimovia Strait on the east. Anita Bay and a roaded area and associated harvest units form the boundary to the south. The City of Wrangell lies almost 10 miles to the northeast and is served by the Alaska Marine Highway and jet service. There are no sites suitable for landing wheeled aircraft, but floatplanes may be able to access the uplands using Kunk Lake and another small lake. Three separate road systems and log transfer facilities exist on the island, two of which are adjacent to this roadless area. The Anita Bay road system is immediately south of the roadless area, while the King George road system bisects the northern portion of the roadless area isolating a relatively small portion on the north end of the roadless area. The island is accessible from saltwater by boat or floatplane and good moorage sites exist. A recreation trail leads to Kunk Lake, which is fairly centrally located on the east side of the area. The forest roads located south of the area provide road access to the edge of the area. There are no places suitable for landing wheeled airplanes.

**(2) History:** North Etolin Island was claimed by the Tansaqwedi and Xokedi clans of the Stikine Tlingit. Their use is evidenced by the remains of villages, fish camps, fort sites, petroglyphs, and fish weirs. Historic uses included hunting, trapping, and commercial fishing. Goldschmidt and Haas (1998) identified a smokehouse, fort, and camp on the east side of the area in 1946. They also identified two commercial fishtraps on the west side of the area. Timber harvest has occurred extensively in the Anita Bay area and to the west; the King George timber sale on the northern end of the area is currently being implemented, and is approximately 65 percent complete.

**(3) Geography and Topography:** The area is generally characterized by steeply-rising mountains reaching elevations of over 3,000 feet. The tallest in this area, Red Mountain, is over 3,900 feet. Alpine covers 2,328 acres and rock covers another 854 acres. There are no ice or snow features mapped in this area. There is much landform variety. Mountains less than 3,500 feet in elevation were overridden by glaciers in the past and have rounded, hummocky summits, knobs, and ridges. Higher mountains are sometimes sharp crested. Two drainages flow to the north, and a major drainage flows to the south through the roadless area. Kunk Lake and several small lakes exist between the mountain peaks, and account for 374 acres. The area includes 44 miles of saltwater shoreline and 24 acres of islands.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is generally subject to continental influence from the mainland and the Stikine River. Glacial flour is present in the marine environment in the northern part of this province nearly year round. All forest plant associations except those occurring only on outer coast areas are present.

Ecological Section/Subsection. The North Etolin Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), represented by three ecological subsections (see table below). The three subsections each cover approximately a third of the roadless area. The Etolin Granitics Ecological Subsection has a large area covered by jagged granite spires with a thin layer of soil and

extensive alpine vegetation. Productive forests are limited to colluvium at the base of slopes. The Stikine Strait Complex Ecological Subsection is a combination of glacially carved volcanic or sedimentary rock and glacial deposition in the valleys. Wetlands and low productivity forests cover much of the Stikine Strait Complex Ecological Subsection. The Zimovia Strait Complex Ecological Subsection has a landscape of stratified sedimentary rock and volcanic intrusions lying beneath broad glacial valleys and rounded hills. Roughly half of the Zimovia Strait Complex Ecological Subsection includes mineral soils supporting productive hemlock forests with occasional stands of cedar or Sitka spruce (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Etolin Granitics | 36% |
| | Stikine Strait Complex | 34% |
| | Zimovia Strait Complex | 30% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are very acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Alpine vegetation (mapped as 2,328 acres) dominates above 2,500 feet elevation. The valley floors and poorly-drained areas between hills are generally covered with muskeg and scrub lodgepole pine. 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. Steeper, more-well-drained hillsides support heavy stands of Sitka spruce, western hemlock, redcedar, and Alaska-cedar.

There are approximately 36,678 acres mapped as forest land of which 19,519 acres or 53 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 10,279 acres or 53 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 1,657 acres of high-volume, coarse-canopy old growth. In addition, approximately 1,062 acres of second growth have resulted from timber harvest activities.

**(d) Fish Resources:** Kunk Lake and Creek support all five species of salmon, as well as steelhead, rainbow, and cutthroat trout, and Dolly Varden char. King George Creek supports pink, chum, coho, and sockeye salmon, cutthroat trout, and Dolly Varden char. Kunk Lake and Creek have high value for fish due to the diversity of species that use the available habitat.

**(e) Wildlife Resources:** Important species include Sitka black-tailed deer, black bear, wolves, moose, and elk. Elk were introduced to the island in 1986 as a cooperative effort to establish elk in Southeast Alaska. Subsequent elk transplants have occurred and are planned. The elk herd has increased to a huntable population and spread to other islands.

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

| LUD | Acres |
|---|---|
| Scenic Viewshed | 11,365 |
| Timber Production | 7,713 |
| Modified Landscape | 4,446 |
| Old-growth Habitat | 18,215 |

Approximately 56 percent of the roadless area was allocated to development LUDs (Scenic Viewshed, Timber Production, Modified Landscape). The majority of the roadless area located adjacent to saltwater, on the north and west sides of this roadless area, was allocated to the Scenic Viewshed LUD and accounts for approximately 27 percent of the roadless area. The Timber Production LUD was assigned to approximately 18 percent of the roadless area. Approximately 11 percent of the roadless area was allocated to the Modified Landscape LUD.

Approximately 44 percent of the roadless area was allocated to one non-development LUD, Old-growth Habitat. A large portion of the southeast part of this area was allocated to the Old-growth Habitat LUD, as were smaller areas located in the northern portion of the area.

The saltwater bodies surrounding the island receive moderately heavy use by commercial and pleasure boats. Due to the area's proximity to Wrangell, many people use the beaches for picnicking and other day use activities, especially near the mouth of Honeymoon Creek and the King George Bay estuary. The interior part of the area is rarely used (USDA Forest Service, 1996). The trail that leads to Kunk Lake does, however, receive light recreation use. There is a 3-sided shelter at the lake. There is subsistence use in the area.

Road and harvest units associated with the King George Timber Sale (USDA Forest Service, 1996) extend east/west along the two major drainages in the north portion of the area.

**(6) Appearance (Apparent Naturalness):** Overall, the area has high scenic quality with a natural appearing landscape. Stikine Strait, Chichagof Pass, and Zimovia Strait border the area to the north, east, and west, respectively. Portions of this roadless area are visible from boats traveling these waters. Cruise ships and the Alaska Marine Highway use Stikine Strait to access Wrangell and Ketchikan. Chichagof Pass is occasionally used as an alternative passage for the Alaska Marine Highway. The east side of the roadless area is visible from Zimovia Strait, which provides access to points south, as well as from some parts of the City of Wrangell (USDA Forest Service, 1996). Logging has occurred on the southeast and northeast shores of the area.

**(7) Surroundings (External Influences):** The area is located on the north end of Etolin Island. Boats traveling the adjacent saltwater may be visible from within parts of the area, but usually are not intrusive. It is possible to see harvested areas and roads from some locations within this roadless area. Sights and sounds from the town of Wrangell may be apparent from some locations, especially with development of private land across from Zimovia Strait. The Alaska Marine Highway passes within one-half mile along the west side of the roadless area.

**(8) Attractions and Features of Special Interest:** The landform variety, including subalpine peaks, stream drainages, and lakes, is an attraction as is the presence of elk. The area contains nine inventoried recreation places, which cover 3,035 acres, or 7 percent of the roadless area. Kunk Lake is a popular recreation destination accessible by trail, with a 3-sided shelter at the lake.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The boundaries of this area have changed in three main ways since 1989. First, logging and road building has occurred in the south portion of the area most notably along and to the west of Fishtrap Creek. These activities have altered the south boundary of the area. Second, beach logged areas that were excluded from the 1989 roadless area, are included within the boundaries of the 2003 area. Third, the King George timber sale in the north has resulted in further reductions in the size of the roadless area.

## II. Capability of Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The roadless area is largely unmodified. However, ongoing developments have affected the natural integrity and apparent naturalness in the north and along much of the south. Road construction and harvest in the northern portion of the area is visible from adjacent portions of the

roadless area, and nearly divides the area in two. A small beach-logged area on the northeast portion has regrown. Beach logged areas also exist on the southeast shore.

**(2) Opportunity for Solitude, Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a moderate opportunity for solitude within the area. Present recreation use levels are low except at the mouths of some streams and along the Kunk Lake Trail. The character of the area generally allows the visitor to feel remote from the sights and sounds of human activity. Generally, a person camped or traveling inland is unlikely to see others. Low-flying aircraft may, at times, pass over the roadless area, and the State ferry and boaters may pass next to the roadless area, but all are generally non-intrusive.

Travel within the area is challenging, requiring a high degree of woods skills and experience. The presence of black bears, especially around salmon streams in the fall, presents a degree of challenge and a need for caution.

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) | 10,940 | 26% |
| Semi-Primitive Non-Motorized (SPNM) | 10,918 | 26% |
| Semi-Primitive Motorized (SPM) | 13,396 | 32% |
| Roaded Modified (RM) | 6,487 | 16% |

The area contains nine inventoried recreation places, which cover 3,035 acres, or 7 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPNM | 0 | 0 |
| SPM | 8 | 2,771 |
| RM | 4 | 264 |

* 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 is accessible by boat from the community of Wrangell in less than 1 hour, and from Ketchikan in approximately 7 hours. The saltwater bodies surrounding the island receive moderately heavy use by commercial and pleasure boats. Due to the area's proximity to Wrangell, many people use the beaches for picnicking and other day use activities, especially near the mouth of Honeymoon Creek and the King George Bay estuary. The interior part of the area is rarely used (USDA Forest Service, 1996). The trail that leads to Kunk Lake does, however, receive light recreation use. The Kunk Lake Trail provides access to a portion of the interior of this roadless area, and to a remote lake basin with a 3-sided shelter.

**(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 North Etolin Roadless Area was given a rating of 25 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 effects of the ongoing development in the area allowed by the Forest Plan. A large portion of the roadless area, excluding the relatively small area isolated by the King George road system, was rated separately and given a rating of 20.

**(4) Ecologic and Geologic Values:** The majority of the area is forested. Areas of high-volume, old growth are located on the lower elevation areas along the shorelines and waterways. The area contains one of nine large blocks of old growth on Etolin Island (USDA Forest Service, 1996).

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified VCU 463 on the east coast of the island as a primary sportfish producer. No VCUs were identified as primary salmon producers.

Information from the Starfish Timber Sale, Etolin Island EIS (USDA Forest Service, 1991) indicates that fish species in this area are pink, chum, coho, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char. Fishtrap and Duckbill Creeks have high potential for some good to excellent sport fishing, and have been identified as high quality fish habitat within the Wrangell Ranger District.

Information from the King George Timber Sale (USDA Forest Service, 1996) indicates that pink, chum, coho, and sockeye salmon, cutthroat trout, and Dolly Varden inhabit King George Creek and its tributaries. State escapement surveys indicate peak escapement of about 3,250 pink salmon. A small steelhead population is likely, but has not been verified.

Kunk Lake and Creek have high value for fish due to the diversity of species that use the available habitat. Although the creek has no exceptional runs of any one fish, it does support all five species of Pacific salmon, as well as steelhead, rainbow, cutthroat, and Dolly Varden char. ADF&G lists Kunk Lake and Creek as one of 65 “important” watersheds in Southeast Alaska.

**(b) Wildlife Resources:** This roadless area supports a diverse array of wildlife including Sitka black-tailed deer, black bear, wolves, moose, and elk (USDA Forest Service, 1991; 1996). Elk were introduced to the island in 1986 as a cooperative effort to establish elk in Southeast Alaska. Subsequent elk transplants have occurred and are planned. The elk herd has increased to a huntable population and spread to other islands. Other identified species include river otter, marten, beaver, bald eagle, marbled murrelets, Canada goose, and red squirrel. One known sea lion winter haul out site has been identified north of the King George estuary.

**(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. One sea lion winter haul-out site has been identified north of the King George estuary. 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. A goshawk was observed in the area in 1994, but no known nests have been recorded. In addition, eight sensitive plant species are known or suspected to occur in the Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are no known significant karst and cave resources in the area. There is, however, a band of carbonate rock that extends into the southwest corner of the roadless area near Kindergarten Bay.

**(5) Scientific and Educational Values:** There are opportunities to observe a variety of ecological and landform settings. The area is located approximately 10 miles south of the City of Wrangell and is, therefore, relatively accessible to school-age children.

**(6) Scenic Values:** Overall, the area has high scenic quality with a mostly natural appearing landscape. Stikine Strait, Chichagof Pass, and Zimovia Strait border the area to the north, east, and west, respectively. Portions

of this roadless area are visible from boats traveling these waters. Cruise ships and the Alaska Marine Highway use Stikine Strait to access Wrangell and Ketchikan. Chichagof Pass is occasionally used as an alternative passage for the Alaska Marine Highway. The east side of the roadless area is visible from Zimovia Strait, which provides access to points south, as well as from some parts of the City of Wrangell (USDA Forest Service, 1996). Logging has occurred on the southeast and northeast shores of the area.

Visual Priority Routes and Use Areas identified by the Forest Plan that are adjacent to the area include Stikine Strait, Chichagof Pass, and Zimovia Strait. Stikine Strait is part of the Alaska Marine Highway and used by tour ships. Chichagof Pass and Zimovia Strait are used by tour ships. Anita Bay and King George were identified as Saltwater Use Areas and Kunk Lake was identified as a Dispersed Recreation Area. A person in a boat approaching the roadless area would see natural scenery.

About 49 percent of this roadless area is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type). Forty-three percent of the roadless area is inventoried as Variety Class B (possessing landscape diversity that is common for the character type), and 7 percent is inventoried as Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, 81 percent, has an Existing Visual Condition (EVC) Type I, where only ecological change has occurred to the landscape. Four percent of the area has an EVC Type III, where changes in the landscape may be seen by the average person, but it does not dominate the landscape. Three percent of the area has an EVC Type IV, where changes in the landscape are easily seen by the average person, but it resembles natural patterns. About 11 percent has an 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:** North Etolin Island was claimed by the Tansaqwedi and Xokedi clans of the Stikine Tlingit. Their use is evidenced by the remains of villages, fish camps, fort sites, petroglyphs, and fish weirs. Historic uses included hunting, trapping, and commercial fishing. The area is located approximately 10 miles south of the City of Wrangell.

The saltwater bodies surrounding the island receive moderately heavy use by commercial and pleasure boats. Due to the area's proximity to Wrangell, many people use the beaches for picnicking and other day use activities, especially near the mouth of Honeymoon Creek and the King George Bay estuary. The interior part of the area is rarely used (USDA Forest Service, 1996). The trail that leads to Kunk Lake does, however, receive light recreation use. Review of outfitter/guide use data for the Wrangell Ranger District during calendar year 2000 did not identify any outfitter/guide use in this area.

There is subsistence use in the area. The Wildlife Analysis Area that includes this roadless area accounted for 1 to 3 percent of annual average Wrangell deer harvest during 1987 to 1994. The VCUs in this area were not included among the highest value community use areas but one VCU, 467 at the head of Mosman Inlet, was included in the third most important group. VCU 462 on the north coast at Chichagof Pass was listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is well defined by saltwater on the west, east, and north. The southern boundary formed by roads and harvest units generally follows the landscape. A road and associated harvest units extend into the area along Fishtrap Creek, a major drainage in the south portion of the area. A road associated with the King George Timber Sale (USDA Forest Service, 1996) extends east/west along the two major drainages in the north portion of the area. The road almost connects the east and west shorelines, isolating a relatively small portion of the roadless area. As a result of these existing developments, the roadless area is irregularly shaped and poorly suited for wilderness management.

With the exception of the South Etolin Wilderness located about 10 miles to the south, surrounding lands were allocated to the same LUDs as the North Etolin Roadless Area (Scenic Viewshed, Old-growth Habitat, Modified Landscape, and Timber Production). The areas located directly across Stikine Strait, Chichagof Pass, and Zimovia Strait from the area were allocated to either the Scenic Viewshed or Old-growth Habitat LUDs to minimize the visual effects of any future management activities upon people traveling by boat. There is also an area of private land located on the west side of Wrangell Island directly across Zimovia Strait from the North Etolin 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 outfitter and guide permits, developed trails, and cabins or shelters. The elk population has grown to a huntable size and a limited number of hunting permits have been issued annually since 1997.

In 1991, the Wrangell Ranger District initiated a broad public scoping effort to identify possible recreation developments. The results of this scoping indicated that there was wide support for development of a high country hiking trail with associated shelters or cabins on North Etolin Island (USDA Forest Service, 1996). Public scoping for the King George Timber Sale, located in the north portion of the North Etolin Roadless Area also identified concerns for the recreation potential of the area (USDA Forest Service, 1996).

**(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 potential fish habitat enhancement project has been identified for the King George Creek area, which would involve channel modification to improve access to the upper reaches of the stream system. Fish barriers exist in a number of streams that flow through this roadless area.

**(4) Wildlife Resources:** Moose and winter range habitat improvement projects are planned in the area. These projects typically consist of browse enhancement involving seeding, planting, and releasing.

**(5) Timber Resources:** There are approximately 19,519 acres mapped as productive old growth in the roadless area. In addition, there are approximately 1,062 acres of second growth. Of these acres, 15,173 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), 3,973 acres or 10 percent of this roadless area, are estimated to be suitable for timber production. Approximately 1,619 of the suitable acres are mapped as high-volume old growth; of these acres, 189 are mapped as high-volume, coarse-canopy old growth. Some areas are highly prone to strong winds which blow down standing timber left exposed when adjacent stands are cut.

The King George Timber Sale is located on the northern portion of this area. This timber sale and associated road extends east/west along the two major drainages in the north portion of the area. The timber harvest is approximately 65 percent complete and the road has been completed as of the end of the 2002 operating season.

The potential for managing timber in this roadless area is high, as roads could be extended from the existing system and much of the area could be logged without constructing a camp or additional log transfer facilities.

**(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 known current claims in this area. The roadles area contains an estimated 37,030 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 an abandoned limestone claim near Quiet Harbor, in the southwest portion of the area.

**(8) Transportation and Utilities:** There are no known public transportation plans for this area. Proposed road improvements identified in the March 1999 Southeast Alaska Transportation Plan include upgrading Forest Highway 16, which runs along the west side of Wrangell Island and is visible from some locations in the North Etolin Roadless Area.

**(9) Water Availability and Use:** There are no existing or planned hydropower or domestic water projects in the area.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas, and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** No special uses are authorized in this area.

**(12) Land Status:** All National Forest System lands are within the roadless area.

## IV. Wilderness Evaluation (Need for Wilderness)

### (1) Public and Congressional Interest

**(a) Interest Expressed by with Local Users and Residents:** The area is primarily used for recreational purposes by the citizens of Wrangell. There has been no formal support for or opposition to maintaining this area in a roadless condition. There has been general support for the elk transplant program on the island.

**(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 Etolin Roadless Area. In 2001, HR 2908 did not propose the area for wilderness, but did propose that the majority of the area should be classified as a Congressionally Designated LUD II area and managed in an unroaded condition. It also proposed that King George Creek be classified as a Wild and Scenic River.

**(c) Public Input During Forest Plan Revision and Appeals:** No specific recommendations for wilderness were made. The Wrangell Resource Council recommended that the area be allocated to the Primitive Recreation LUD to protect the unfragmented old growth for wildlife, subsistence, and sport hunting. They also recommended that logging not be permitted in the Kunk Lake or King George drainages, which they identified as important recreation areas. The Juneau Convention and Visitors Bureau included Kunk Lake in a short list of areas that they believe should be managed to provide a high quality sport fishing experience.

Representatives of the timber industry, recommended that Management Area S23, which includes the North Etolin Roadless Area, be allocated to the Timber Production LUD. Other timber industry representatives recommended that, with the exception of some Scenic Viewshed or Modified Landscape along the ferry route, all of Management Area S23 should be allocated to the Timber Production LUD to keep timber harvest economic in these already-developed areas.

Kunk Lake and Creek were identified in the September 25, 1997, appeal filed by the Narrows Conservation Coalition as an area left unprotected by the 1997 Tongass Land and Resource Management Plan that is of particular concern to the people in the Stikine 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.

**(e) Public Input Expressed for Project-level EISs and Other Input:** Public comments received on the Starfish Timber Sale EIS specifically addressed the proposed sale that has since taken place. This area, which parallels Fishtrap Creek, is no longer part of the North Etolin Roadless Area. General concerns were expressed with respect to the potential effects of the proposed sale upon wildlife habitat (USDA Forest Service, 1991). In 1991, the Wrangell Ranger District initiated a broad public scoping effort to identify possible recreation developments. The results of this scoping indicated that there was wide support for development of a high country hiking trail with associated shelters or cabins on North Etolin Island (USDA Forest Service, 1996). Public scoping for the King George Timber Sale, located in the north portion of the North Etolin Roadless Area also indicated concerns for the recreation potential of the area (USDA Forest Service, 1996). General concerns were expressed that the King George Timber Sale project area should remain roadless because it is the only part of North Etolin Island that is undeveloped. It was also noted that roads affect wolves, marten, and bear.

**(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 Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 232 for permanent protection as LUD II. SEACC recommended the remaining unlogged portions of Woronkofski, Zarembo, and North Etolin Islands be safeguarded through LUD II protection.

**(2) Nearby Roadless and Wilderness Areas and Uses:** There are two roadless areas located on south Etolin Island. These areas are separated from the North Etolin Roadless Area by existing roads and harvest units. Additional roadless areas are located nearby, across narrow saltwater channels, on Woronkofski Island and Wrangell Island. There are also roadless areas located across Stikine Strait on Zarembo Island. The nearest wilderness is South Etolin, located approximately 6 miles south of the North Etolin Roadless Area. The Stikine-LeConte Wilderness is located approximately 20 miles to the north. This area currently receives light use inland, away from saltwater or road access.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 60 | 80 |
| Wrangell (Pop. 2,308) | 10 | 15 |
| Petersburg (Pop. 3,224) | 40 | 40 |
| Juneau (Pop. 30,711) | 155 | 165 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The North Etolin Roadless Area is located on the north end of Etolin Island and is bounded by Chichagof Pass to the north, Stikine Strait on the northwest, and Zimovia Strait on the east. Anita Bay and a roaded area and associated harvest units form the boundary to the south. The roadless area is generally characterized by steeply-rising mountains reaching elevations of over 3,000 feet. The tallest in this area, Red Mountain, is over 3,900 feet. There is much landform variety. Mountains less than 3,500 feet in elevation were overridden by glaciers in the past and have rounded, hummocky summits, knobs, and ridges. Higher mountains are sometimes sharp crested. Two drainages flow to the north, and a major drainage flows to the south through the roadless area. Kunk Lake and several small lakes exist between the mountain peaks.

The area is mostly natural appearing. However, it is influenced by developed areas that form its boundaries in the south and to some degree in the north. The natural integrity is considered moderate and the apparent naturalness is high. The natural integrity increases to high and the apparent naturalness increases to very high when the eastern portion is rated separately. The opportunity for solitude is moderate and the opportunity for primitive recreation is high.

Approximately 49 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The area has relatively high cultural values.

The roadless area includes about 10,279 acres of high-volume, old-growth forest. Of these acres, 1,657 are mapped as high-volume, coarse-canopy old growth.

The North Etolin Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes up about 8 percent of the province. It is one of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The North Etolin 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.

Approximately one-third (36 percent) of the roadless area is in the Etolin Granitics Ecological Subsection; this portion of the roadless area represents 17 percent of the entire ecological subsection, which is partially protected by existing wilderness (37 percent) and other non-development LUDs (19 percent). One-third (34 percent) of the roadless area is in the Stikine Strait Complex Ecological Subsection; this portion of the roadless area represents 22 percent of the entire ecological subsection, 42 percent of which is protected by existing non-development LUDs. The remaining 30 percent of the roadless area is in the Zimovia Strait Complex Ecological Subsection; this portion of the roadless area represents 6 percent of the entire ecological subsection, 5 percent of which is protected in existing wilderness and 26 percent in other non-development LUDs.

The North Etolin 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. The large eastern portion around Kunk Lake and surrounding areas, excluding the relatively small area isolated by the King George road system, was rated separately and received a score of 20.

There is both local and national support for management of the area in an unroaded condition, but very little support for designating the area as wilderness. Designation would create a wilderness with relatively high scenic and cultural values, but one that is heavily influenced by ongoing development activities. Designation of the area would add Congressional protection to approximately 22 percent of the Stikine Strait Complex Ecological Subsection that is not currently represented in wilderness or LUD II. The King George Timber Sale is under contract and operating in the north portion of the area. 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 North Etolin Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 44 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 56 percent. The land in the development LUDs provides an estimated 3,973 acres that are suitable for timber production (5 percent of the suitable acres on the Wrangell Ranger District). Approximately 189 of the suitable acres are classified as high-volume, coarse-canopy old growth. The King George Timber Sale contract would continue. The roadless area contains an estimated 37,030 acres of undiscovered locatable mineral resources. All of these acres are considered to have low potential for development. The timber sales, recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area, including the cultural and most of the scenic values, would be provided under the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. No timber harvest would be allowed. Designation of the area as LUD II would add Congressional protection to approximately 22 percent of the Stikine Strait Complex Ecological Subsection that is not currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area, including the cultural 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. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area as wilderness would add Congressional protection to approximately 22 percent of the Stikine Strait Complex Ecological Subsection that is not currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area, including the cultural 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 232 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 41,740 |
| 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 | 18,215 | 18,215 | 18,215 | 18,215 | 18,215 | | 18,215 | |
| Semi-remote Recreation | | | | | | | | |
| Recommended LUD II | | | | | | 41,740 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 11,365 | 11,365 | 11,365 | 11,365 | 11,365 | | 11,365 | |
| Modified Landscape | 4,446 | 4,446 | 4,446 | 4,446 | 4,446 | | 4,446 | |
| Timber Production | 7,713 | 7,713 | 7,713 | 7,713 | 7,713 | | 7,713 | |
| **TOTAL** | **41,740** | **41,740** | **41,740** | **41,740** | **41,740** | **41,740** | **41,740** | **41,740** |
| Suitable Timber Lands | 3,973 | 3,973 | 3,973 | 3,973 | 3,973 | 0 | 3,973 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Mosman (233)

**ACRES (NFS):** 56,757

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 22 (21, 23, 24)

### I. Overview and Description

**(1) Location and Access:** The area is located in the central-western portion of Etolin Island. It is composed of three lobes, separated by Mosman and Burnett Inlets. It is bounded by Clarence Strait on the west and a portion of the south, the South Etolin Roadless Area on the east, the South Etolin Wilderness on a portion of the south and east, Ernest Sound to the south, and an area of roads and harvest units to the north. The city of Wrangell lies almost 25 miles to the northeast, and is served by the Alaska Marine Highway and jet service. There are no sites suitable for landing wheeled aircraft. A small road system and log transfer facility exists on the island immediately north of the roadless area. The island is accessible from saltwater by boat, and good moorage sites exist. Forest roads located immediately north provide road access to the area. Access into the interior is by foot or helicopter.

**(2) History:** This area was claimed by several Stikine Tlingit clans during prehistoric times. Evidence includes the remains of villages, fish camps, fish weirs, petroglyphs, and bark-stripped trees. Evidence of historic use includes fox farms, trapping cabins, homesteads, canneries and temporary camps. Goldschmidt and Haas' (1946) mapping project identified a former camp and two smokehouses around the shoreline of this area. They also identified a cemetery near Cooney Cove and commercial fish traps and building remnants on the west shoreline of the area.

Beach logging has occurred at a number of locations in the area, primarily in relatively isolated patches along Mosman and Burnett Inlets. Small areas have also been logged at the head of Cooney Cove and on Mosman Island. The Steamer Bay recreation cabin is located in the northwest part of the area on the east side of Steamer Bay.

**(3) Geography and Topography:** The area is generally characterized by a series of mountains oriented nearly in a north-south alignment, separated by the long, narrow waterways of Mosman and Burnett Inlets. There is much landform variety as some of the mountains are gentle, while others, such as the Keating Range, rise steeply. Alpine covers 1,873 acres and rock covers 1,523 acres. There are no ice or snow features mapped in the area. The highest peaks attain elevations of about 3,000 feet. Numerous short streams drain the area. Several lakes exist in the area, the major ones being Streets Lake to the west, and Navy and Burnett Lakes on the east side of the roadless area. These lakes cover about 581 acres. Small islands make up another 1,843 acres. There are 156 miles of saltwater shoreline in this area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is generally subject to continental influence from the mainland and the Stikine River. All forest plant associations except those occurring only on outer coast areas are present.

Ecological Section/Subsection. The Mosman Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), represented by three ecological subsections (see table below). The Etolin Granitics Ecological Subsection is the dominant subsection covering 43 percent of the Mosman Roadless Area. Jagged granite spires with a thin layer of soil and extensive alpine vegetation cover much of the Etolin Granitics Ecological Subsection. Productive forests are limited to colluvium at the base of

slopes. The Stikine Strait Complex Ecological Subsection, covering 34 percent of the roadless area, is a combination of glacially carved volcanic or sedimentary rock and glacial deposition in the valleys. Wetlands and low productivity forests cover much of the Stikine Strait Complex Ecological Subsection. The balance of the roadless area, 23 percent, is within the Clarence Strait Volcanics Ecological Subsection, 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 (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Etolin Granitics | 43% |
| | Stikine Strait Complex | 34% |
| | Clarence Strait Volcanics | 23% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

More-poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Alpine vegetation (mapped as 1,873 acres) dominates above 2,500 feet in elevation. A few poorly-drained areas between hills are generally covered with muskeg and scrub lodgepole pine. Steeper, more-well-drained hillsides support heavy stands of Sitka spruce, western hemlock, redcedar, and Alaska-cedar.

There are approximately 52,064 acres mapped as forest land, of which 26,656 acres or 51 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 9,140 acres or 34 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 1,103 acres of high-volume, coarse-canopy old growth. The area also includes approximately 438 of second growth where timber harvest, mostly beach harvest, has occurred.

**(d) Fish Resources:** Fish species in this area include pink, chum, coho, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char. King salmon, silver salmon, and halibut have been identified near the Steamer Bay Cabin, which is located in the northwest part of the area. Logjam, Porcupine, Pump, and Navy Creeks have been identified as some of the highest quality fish habitat in the Wrangell Ranger District. Navy and Porcupine creeks are entirely located within the area. Logjam and Pump creeks partially flow through the area.

**(e) Wildlife Resources:** Important species include Sitka black-tailed deer, wolves, black bear, and elk. The elk were introduced on the island in 1986 as a cooperative project. Other species recorded on Etolin Island include porcupine, river otter, beaver, moose, brown bear, pine marten, bald eagle, marbled murrelet, red-tailed hawk, and Canada goose.

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

| LUD | Acres |
|---|---|
| Modified Landscape | 16,921 |
| Timber Production | 7,513 |
| Scenic Viewshed | 6,942 |
| Old-growth Habitat | 23,913 |
| Semi-remote Recreation | 1,468 |

Approximately 55 percent of the roadless area was allocated to a development LUD, which allows timber production and road construction (Modified Landscape, Timber Production, and Scenic Viewshed). The Modified Landscape LUD was assigned to approximately 30 percent of the roadless area. Approximately 13 percent of the roadless area was allocated to the Timber Production LUD. The Scenic Viewshed was allocated to approximately 12 percent of the roadless area.

Approximately 45 percent of the roadless area was allocated to a non-development LUD, which are classified as unsuitable for timber production (Old-growth Habitat, Semi-remote Recreation). Lands allocated to the Old-Growth LUD account for approximately 42 percent of the roadless area. The Semi-remote Recreation LUD was assigned to approximately 3 percent of the roadless area.

Beach logging has occurred at scattered locations in the area, primarily in relatively isolated patches along Mosman and Burnett inlets. Small areas have also been logged at the head of Cooney Cove and on Mosman Island.

The saltwater bodies surrounding the island receive moderately heavy use by commercial and pleasure boats. The shoreline and bays receive light recreation use. There is subsistence use in the area. Steamer Bay Cabin is located in the northwest part of the roadless area. Other facilities located within or immediately adjacent to this area include a fish hatchery, oyster farm, electronic sites, shelter cabin, a fish pass, a research cabin, a fish weir, an abandoned lighthouse and abandoned building materials associated with historic fish traps and fur farms.

**(6) Appearance (Apparent Naturalness):** Overall**,** the roadless area has moderately high scenic quality with a mostly natural appearing landscape. Exceptions include the recreation cabin and other improvements mentioned above, as well as the beach-logged areas. The area is bounded inland on the north side by timber harvest areas. A person in a boat approaching the roadless area would generally see natural scenery. The area is visible from boats traveling on Clarence Strait and Ernest Sound.

**(7) Surroundings (External Influences):** The area is centrally located in the western portion of Etolin Island. Adjacent land uses include the South Etolin Roadless Area and the South Etolin Wilderness. Boats traveling on the adjacent saltwaters may be visible from within parts of the area but usually are not intrusive. It is possible to see timber harvest and roads from some northern locations within this roadless area. This is especially the case with the north portion of the middle lobe of the roadless area, and to a lesser degree for northern portion of the western lobe. There is some developed area along the northern tip of the eastern lobe as well, but is less intrusive. The Alaska Marine Highway passes within 2 miles along the west side of the roadless area.

**(8) Attractions and Features of Special Interest:** The landform variety, including subalpine peaks, stream drainages and lakes, is an attraction. The bays provide sheltered moorages and a sense of remoteness. The elk population is unique to Alaska. Steamer Bay Cabin is located in the northwest part of the roadless area. The area contains 15 inventoried recreation places, which cover 9,484 acres, or 17 percent of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The boundaries of this area have changed slightly as a result of additional timber harvest and road building on the north side of the area. In addition, a very small beach-logged area north of Cooney Cove that was excluded from the 1989 roadless area is included within the boundaries of the 2003 area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** Within the roadless area, the natural integrity is mostly unmodified (93 percent). Exceptions include the recreation cabin and other improvements mentioned above, as well as the beach-logged areas. Despite these modifications and the timber harvest activities that dominate the north

boundary, the majority of the area appears to be natural and appropriate for wilderness classification. The presence of elk, which are a non-native species, affects the natural integrity of the area.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and primitive recreation within the area away from improvements and facilities. There is a hatchery manager and crew that live and work at the Burnett Fish Hatchery, and an oyster farmer that lives near the south end of Mosman Inlet. Present recreation use levels are low except at the mouths of some streams and at the Steamer Bay Cabin. One outfitter/guide reported using the area in 2000 for a total of 4 service days.

Generally, a person camped or traveling inland is unlikely to see others. Low-flying aircraft may, at times, pass over, and the State ferry and boaters may pass next to the roadless area, but all are generally non-intrusive. The character of the area generally allows the visitor to feel remote from the sights and sounds of human activity. The long bays that extend into the area provide access to portions of the interior, as well as protect users from the open waters and the traffic of Clarence Strait.

Travel within the area is challenging, requiring a high degree of woods skills and experience. 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 (especially around salmon streams in the fall) 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) | 6,980 | 12% |
| Semi-Primitive Non-Motorized (SPNM) | 23,258 | 41% |
| Semi-Primitive Motorized (SPM) | 22,493 | 40% |
| Roaded Modified (RM) | 4,025 | 7% |

The area contains 15 inventoried recreation places, which cover 9,484 acres, or 17 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPNM | 1 | 719 |
| SPM | 12 | 8,083 |
| RM | 5 | 683 |

* 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 is accessible by boat from the community of Wrangell in less than 2 hours, and from Ketchikan in approximately 7 hours.

**(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 Mosman Roadless Area was given a rating of 24 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 better reflects the effects of adjacent developments and activities on the wilderness attributes of the area. Each of the three lobes of the roadless area was rated separately. The eastern lobe that is adjacent to the South Etolin Island Wilderness was given a score of 24; the middle lobe, which is relatively small and notably influenced by developments in the north, was given a score of 19; and the western lobe given a score of 23.

**(4) Ecologic and Geologic Values:** With the exceptions of the higher elevations of the Keating Range and Steamer Knoll, the majority of the area is forested. Areas of higher and lower volume old growth tend to be concentrated on the lower elevation areas along the shorelines.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCU 468 surrounding Burnett Inlet as a primary salmon producer. No VCUs were listed as primary sport fish producers.

Fish species in this area include pink, chum, coho, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char (USDA Forest Service, 1991). King salmon, silver salmon, and halibut have been identified near the Steamer Bay Cabin, which is located in the northwest part of the area. Logjam, Porcupine, Pump, and Navy Creeks have been identified as some of the highest quality fish habitat in the Wrangell Ranger District. Navy and Porcupine creeks are entirely located within the area. Logjam and Pump creeks partially flow through the area. A salmon hatchery operated by the Southern Southeast Regional Aquaculture Association at the mouth of Burnett River, also contributes to the salmon fishery producing pink, chum, and more recently, chinook salmon.

Porcupine Creek has high sport fish value (of regional significance) for cutthroat trout, steelhead, and Dolly Varden. The creek has a good coho salmon run and a pink salmon escapement that averages 6,500 fish. A steppass is located in the lower reach of Navy Creek.

**(b) Wildlife Resources:** Important species include Sitka black-tailed deer, wolves, black bear, and elk. Elk were introduced on the island in 1986 as a cooperative project. A grass flat at the mouth of Porcupine Creek provides habitat for black bears. Other species recorded on Etolin Island include river otter, beaver, pine marten, moose, brown bear, bald eagle, marbled murrelet, red-tailed hawk, and Canada goose. There are 44 documented eagle nest trees in this area. VCU 467 has the second highest carrying capacity for black bear and marten on Etolin Island, as well as the third highest carrying capacity for otter and Sitka black-tailed deer.

**(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 Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There is a small area of karst (limestone) adjacent to the northwest portion of the roadless area, in the vicinity of Kindergarten Bay. There are no known karst features in the roadless area. There are no glaciers or unique geologic features.

**(5) Scientific and Educational Values:** There are opportunities to observe a variety of ecological and landform settings. The Steamer Bay Cabin facilitates recreation activities in the area. Elk are also a unique attraction. The area is located approximately 25 miles south of the city of Wrangell.

**(6) Scenic Values:** Overall, the area has moderately high scenic quality with a mostly natural appearing landscape. Exceptions include the recreation cabin and other improvements, as well as the beach-logged areas. There is much landscape variety as some of the mountains that characterize the area are gentle, while others, such as the Keating Range, rise steeply. The area generally appears to be a remote and unmodified landscape when viewed from the Visual Priority Routes and Use areas identified below. Some roads and timber harvest activity can be seen from northern parts of the area.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Clarence Strait, which is part of the Alaska Marine Highway and used by tour ships. Mosman and Burnett inlets are identified as Other Marine Travel Routes. Steamer Bay and Johnson Cove are identified as Saltwater Use Areas and Boat Anchorages. Burnett Inlet is identified as a Saltwater Use Area. The Steamer Bay Forest Service cabin is also identified as a visual priority use area.

About 30 percent of this roadless area is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type). Much of the area, 54 percent, is inventoried as Variety Class B (possessing landscape diversity that is common for the character type) and 13 percent is inventoried as Variety Class C (possessing a low degree of landscape diversity). Approximately 3 percent of the area was not inventoried.

The majority of this roadless area, 90 percent, has an Existing Visual Condition (EVC) Type I, where only ecological change has occurred to the landscape. One percent of this roadless area is EVC Type III, where changes in the landscape are noticed by the average forest visitor. The natural appearance of the landscape remains dominant. About 7 percent has an EVC Type 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.

**(7) Social, Cultural, and Historical Values:** This area was claimed by several Stikine Tlingit clans during prehistoric times. Evidence includes the remains of villages, fish camps, fish weirs, petroglyphs, and bark-stripped trees. Evidence of historic use includes fox farms, trapping cabins, homesteads, canneries, and temporary camps. Goldschmidt and Haas' (1946) mapping project identified former camps or smokehouses around the shoreline of this area. They also identified a cemetery near Cooney Cove and commercial fish traps on the west shoreline of the area. The area is located approximately 22 miles south of the city of Wrangell.

Present recreation use levels are low except at the mouths of some streams and at the Steamer Bay Cabin. One outfitter/guide reported using the area in 2000 for a total of 4 service days. There is subsistence use in the area. The Wildlife Analysis Area that includes this roadless area accounted for 1 to 3 percent of annual average Wrangell deer harvest during 1987 to 1994. The VCUs in this area were not included among the highest value community use areas in the Tongass Fish and Wildlife Resource Assessment. However, VCU 468, surrounding Burnett Inlet, was included in the second most important group and VCU 467 surrounding Mosman Inlet was included in the third most important group. None of the VCUs were listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is well defined by saltwater on the west and south. The northern boundary is defined by flat land running east to west, which contains developments. The eastern boundary is defined by a drainage break of the mountains, which separates this area from the South Etolin Roadless Area. Feasibility of managing the northern portion of this area in a roadless condition is moderate, and is high in the rest of the area. Road construction and timber harvest activities have separated the Mosman Roadless Area into three discrete areas separated from one another by Burnett and Mosman Inlets. This separation would prevent the area from being one coherent wilderness unit. The eastern portion adjacent to the South Etolin Island Wilderness could be managed with the Wilderness.

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

**(1) Recreation, Including Tourism Potential:** There is potential for additional outfitter and guide permits, developed trails, and cabins or shelters. Elk hunting was initiated in 1997 and continues to be administered by the Alaska Department of Fish and Game through a drawing permit system. In 1996, the Alaska Visitors Association

proposed a recreation development in Rocky Bay consisting of hut-to-hut hiking for 25 people a day and an equipment storage facility of 1,000 cubic feet.

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

**(3) Fish Resources:** There are both existing and potential fish enhancement projects in this area. Existing projects include the Denil steppass installed in the lower reach of Navy Creek in 1975 and the fish hatchery constructed in 1978 at the mouth of Burnett River and operated by the Southern Southeast Regional Aquaculture Association. Potential enhancement projects include the lowermost 1,000 feet of Wetbeck and Detailer Creeks, which are channel types that have a moderate-to-high probability of responding to rehabilitation treatments such as alder canopy thinning and rearing habitat structure insertion. Other enhancement plans for coho smolt habitat could include rejuvenating old beaver ponds by creating artificial dams and/or planting hardwood forage.

**(4) Wildlife Resources:** There is the potential for deer habitat improvement projects and elk enhancement projects may surface in the future.

**(5) Timber Resources:** There are approximatley 26,656 acres mapped as productive old growth in the roadless area. In addition, there are approximately 438 acres of second growth due to timber harvest. Of these acres, 20,326 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), 5,576 acres or 10 percent of this roadless area are estimated to be suitable for timber production. Approximately 2,227 of the suitable acres are mapped as high-volume old growth; of these acres, 496 are mapped as high-volume, coarse-canopy old growth. Some areas are highly prone to strong winds which blow down standing timber left exposed when adjacent stands are cut.

The potential for managing timber in this roadless area is moderate, as roads could be extended from the existing system and much of the area could be logged without constructing additional log transfer facilities. Some portions of the roadless area may require new log transfer facilities and roads to manage timber economically. The area is included, along with Roadless Area 234, in the potential Navy timber sale, which is identified in the current Tongass National Forest 10-year action plan for harvest in 2006, 2008, and 2009.

**(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 U.S. Bureau of Land Management lists Porcupine Creek as having potential for mineral extraction, but this is an expired prospect claim. There are no valid claims within the river corridor or on adjacent lands. The roadless area contains an estimated 35,767 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 known transportation or utility corridors planned for this area except potential roads associated with timber management within the LUDs that allow such activity.

**(9) Water Availability and Use**: The Burnett Inlet Fish Hatchery, Mosman Oyster Farm, and the recreation cabin create the water demand in the area. The Burnett Inlet Fish Hatchery operates a FERC-licensed hydroelectric project and gets its water supply from Burnett Lake.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** There are five special use authorizations within the roadless area which include an oyster farm, a communication site (on the mountain between Burnett Inlet and Olive Cove), a fish hatchery, a hydroelectric plant, and a hatchery manager's residence. A permit for a new oyster farm is pending. This area also has one reservation for a lighthouse.

**(12) Land Status:** All National Forest System land is within the roadless area.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** The area is primarily used for recreational purposes by the citizens of Wrangell. There has been no formal support for or opposition to maintaining this area in a roadless condition. The elk transplants have generally been supported.

**(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 Mosman Roadless Area. In 2001, HR 2908 identified the Mosman Roadless Area as a proposed Wilderness Addition.

**(c) Public Input During Forest Plan Revision and Appeals**: A number of comments recommended that the area be designated as the Semi-Primitive Recreation or Primitive Recreation LUD. Burnett Inlet, Mosman Cove, Rocky Bay, and Steamer Bay were specifically addressed in public input during the Forest Plan revision and appeals. In addition, one comment addressed the area as Roadless Area 233. Burnett Inlet, Mosman Cove, and Steamer Bay were identified as areas that should be managed under the Semi-Primitive LUD to protect anchorages and undeveloped recreation. The Alaska Visitors Association proposed a recreation development in Rocky Bay consisting of hut-to-hut hiking for 25 people a day and an equipment storage facility of 1,000 cubic feet. The Wrangell Resource Council commented that unfragmented old growth on Etolin Island should be protected for wildlife, subsistence, and sport hunting.

Timber industry comments recommended that Management Area S23, which includes the South Etolin Roadless Area, be allocated to the Timber Production LUD. Other timber industry comments recommended that, with the exception of some Scenic Viewshed or Modified Landscape along the ferry route, all of Management Area S23 should be allocated to the Timber Production LUD to keep timber harvest economical in these already-developed areas.

Porcupine Creek was identified in the September 25, 1997 appeal filed by the Narrows Conservation Coalition as an area of particular concern to the people in the Stikine area that was left unprotected by the 1997 Tongass Land and Resource Management Plan.

**(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:** Public comments received on the Starfish Timber Sale EIS specifically addressed the proposed sale that has since taken place. General concerns were expressed with respect to the potential effects of the proposed sale upon wildlife habitat (USDA Forest Service, 1991).

**(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, in combination with the South Etolin (#234) Roadless Area and South Etolin Wilderness Area, would conserve valuable remaining undisturbed forested habitats on the island.

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 the Mosman and South Etolin roadless areas for wilderness designation and to be added to the South Etolin Wilderness.

Some individuals recommended this area for permanent protection as wilderness.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The South Etolin Roadless Area is located immediately to the east. A drainage break between mountains separates the two areas. The North Etolin Roadless Area, located to the north, is separated from the Mosman Roadless Area by a valley and roaded area. Additional roadless areas are located nearby, across narrow saltwater channels, and include the Kashevarof Islands and South Zarembo Roadless Areas. The nearest wilderness is the South Etolin Wilderness, which forms part of the Mosman Roadless Area's south and east boundaries.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 55 | 60 |
| Wrangell (Pop. 2,308) | 25 | 30 |
| Petersburg (Pop. 3,224) | 45 | 55 |
| Juneau (Pop. 30,711) | 160 | 175 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Mosman Roadless Area is located in the central-western portion of Etolin Island. It is composed of three lobes, separated by Mosman and Burnett Inlets. It is bounded by Clarence Strait on the west and a portion of the south, the South Etolin Roadless Area on the east, the South Etolin Wilderness on a portion of the south and east, Ernest Sound to the south, and an area of roads and harvest units to the north. The roadless area is generally characterized by a series of mountains oriented nearly in a north-south alignment, separated by the long, narrow waterways of Mosman and Burnett Inlets. There is much landform variety as some of the mountains are gentle, while others, such as the Keating Range, rise steeply. The highest peaks attain elevations of about 3,000 feet. Numerous short streams drain the area. Several lakes exist in the area, the major ones being Streets Lake to the west, and Navy and Burnett Lakes on the east side of the roadless area.

The area is mostly natural appearing; however, it is influenced by developments along its northern boundary. The natural integrity is high and the apparent naturalness is very high for the overall area. When rated separately, the eastern portion has very high natural integrity and outstanding apparent naturalness. The middle portion is more influenced by adjacent activities and has high natural integrity and apparent naturalness. The western portion has very high natural integrity and apparent naturalness. The opportunity for solitude is high and the opportunity for primitive recreation is very high for the area.

Approximately 30 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The landform variety, including subalpine peaks, stream drainages and lakes, is an attraction. The introduced elk population is unique to Southeast Alaska, but is not a valuable attribute for wilderness.

The roadless area includes about 9,140 acres of high-volume, old-growth forest. Of these acres, 1,103 are mapped as high-volume, coarse-canopy old growth.

The Mosman Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes up about 11 percent of the province. It is one of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The Mosman 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 largest portion (43 percent) of the roadless area is in the Etolin Granitics Ecological Subsection; this portion of the roadless area represents 28 percent of the entire ecological subsection; of which, 37 percent is protected in existing wilderness and 19 percent in other non-development LUDs. One-third (34 percent) of the roadless area is in the Stikine Strait Complex Ecological Subsection; this portion of the roadless area represents 30 percent of the entire ecological subsection, 42 percent of which is protected by existing non-development LUDs. The remaining 23 percent of the roadless area is in the Clarence Strait Volcanics Ecological Subsection; this portion of the roadless area represents 5 percent of the entire ecological subsection, 15 percent of which is protected in existing wilderness and 34 percent in other non-development LUDs.

The Mosman 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. The eastern portion of the roadless area was rated separately and received a score of 24; the middle portion rated 21; and the western portion rated 23.

There is considerable local and national support for managing the area in an unroaded condition, and some support for designation of the area as wilderness. Designation would create a wilderness with relatively good scenic values and that could extend the South Etolin Wilderness to the west. Designation of the area would also add Congressional protection to approximately 30 percent of the Stikine Strait Complex Ecological Subsection that 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.

## V. Environmental Consequences

The Mosman Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 is implemented. Approximately 45 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 55 percent. The land in the development LUDs provides an estimated 5,576 acres that are suitable for timber production (6 percent of the suitable acres on the Wrangell Ranger District). Approximately 496 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains an estimated 35,767 acres of undiscovered locatable mineral resources; all of the acres are considered to have low potential for development. The timber sales, recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area, including some of the scenic values, could be affected by ongoing developments allowed by the Forest Plan.

Under Alternative 6, 7, or 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special use 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, including the high scenic values, would be provided long-term protection if designated wilderness. Designation of the area would add Congressional protection to approximately 30 percent of the Stikine Strait Complex Ecological Subsection that is not currently represented in wilderness or LUD II. Designation of the area to wilderness would extend the South Etolin Island Wilderness to the west and across the southern end of the island.

| Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 233 (in acres) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Land Use Designation** | **Alt 1** | **Alt 2** | **Alt 3** | **Alt 4** | **Alt 5** | **Alt 6** | **Alt 7** | **Alt 8** |
| **Recommended Wilderness** | | | | | | 56,757 | 56,757 | 56,757 |
| **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** | 23,913 | 23,913 | 23,913 | 23,913 | 23,913 | | | |
| **Semi-remote Recreation** | 1,468 | 1,468 | 1,468 | 1,468 | 1,468 | | | |
| **Recommended LUD II** | | | | | | | | |
| **LUD II** | | | | | | | | |
| **Wild, Scenic, Recreational River** | | | | | | | | |
| **Experimental Forest** | | | | | | | | |
| **Scenic Viewshed** | 6,942 | 6,942 | 6,942 | 6,942 | 6,942 | | | |
| **Modified Landscape** | 16,921 | 16,921 | 16,921 | 16,921 | 16,921 | | | |
| **Timber Production** | 7,513 | 7,513 | 7,513 | 7,513 | 7,513 | | | |
| **TOTAL** | **56,757** | **56,757** | **56,757** | **56,757** | **56,757** | **56,757** | **56,757** | **56,757** |
| **Suitable Timber Lands** | 5,576 | 5,576 | 5,576 | 5,576 | 5,576 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** South Etolin (234)

**ACRES (NFS):** 28,679

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 24 (23, 25)

### I. Overview and Description

**(1) Location and Access:** The area is located on the east side of south Etolin Island. It encompasses the east peninsula, as well as a more centrally located portion of the island. The area is bordered to the east by Zimovia Strait, by forest roads and associated harvest units to the north, and by the Mosman Roadless Area to the west. The South Etolin Wilderness and Menefee Inlet extend north into the area. The City of Wrangell, which lies 20 miles to the north, is served by the Alaska Marine Highway and jet service. There are no sites suitable for landing wheeled aircraft. A small road system and log transfer facility exist on the island immediately north of the roadless area. The island is accessible from saltwater by boat or floatplane and there are good moorage sites. Forest roads located north and west of the area provide road access to the edge of the area. Access into the interior is by foot or helicopter.

**(2) History:** South Etolin Island was inhabited by several clans of the Stikine Tlingit. Evidence of their use includes several village sites and numerous fort sites, temporary camps, fish weirs, petroglyphs, and bark-stripped trees. Historic use of south Etolin Island was considerable and is represented by the remains of the first salmon hatchery in Alaska, as well as salteries, canneries, fox farms, trapping cabins, and other temporary camps. Beach logging has occurred along the east shore of Menefee Inlet, on the north shore of Southwest Cove, and west of Olive Cove.

**(3) Geography and Topography:** The area is generally characterized by a series of rugged mountains, subalpine ridges, and glacial cirque lakes. Several of the mountains rise to over 3,000 feet. Alpine accounts for approximately 762 acres and rock covers 1,030 acres of the roadless area. There are no ice or snow features mapped in the area. Numerous short streams drain the area. There are a number of lakes in the area, which cover approximately 330 acres. Several small islands separated by narrow bodies of water lie immediately east of the peninsula, which total 227 acres, and are included in this roadless area. The area includes about 44 miles of saltwater shoreline.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is generally subject to continental influence from the mainland and the Stikine River. Glacial flour is present in the marine environment in the northern part of this province nearly year round. All forest plant associations except those occurring only on outer coast areas are present.

Ecological Section/Subsection. The South Etolin Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), represented by two ecological subsections (see table below). The Zimovia Strait Complex Ecological Subsection, the dominant subsection, is a landscape of stratified sedimentary rock and volcanic intrusions lying beneath broad glacial valleys and rounded hills. Roughly half of the Zimovia Strait Complex Ecological Subsection includes mineral soils supporting productive hemlock forests with occasional stands of cedar or Sitka spruce. The remainder of the South Etolin Roadless Area, approximately 30 percent, lies within the Etolin Granitics Ecological Subsection,

characterized by jagged granite spires with a thin layer of soil and extensive alpine vegetation. Productive forests are limited to colluvium at the base of slopes (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Zimovia Strait Complex | 70% |
| | Etolin Granitics | 30% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry. Poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg. Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Alpine vegetation (mapped as 762 acres) dominates above 2,500 feet elevation. The valley floors and poorly-drained areas between hills are generally covered with muskeg and scrub lodgepole pine. 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. Steeper, more-well-drained hillsides support heavy stands of Sitka spruce, western hemlock, redcedar, and Alaska-cedar.

There are approximately 26,109 acres mapped as forest land of which 10,889 acres (42 percent) are mapped as productive old-growth forest. Of the productive old growth, approximately 3,090 acres (28 percent) are mapped as high-volume, old-growth forest. The productive old growth includes about 168 acres of high-volume, coarse-canopy old growth. There are approximately 573 acres of second-growth forest that has resulted from beach logging activities along the east shore of Menefee Inlet, Southwest Cove, and west of Olive Cove.

**(d) Fish Resources:** Few streams containing fish populations exist in the area. A small portion of Olive Creek extends into the area. This creek has been identified as having high quality fish habitat and is popular for steelhead and rainbow trout fishing.

**(e) Wildlife Resources:** Important species include Sitka black-tailed deer, wolves, black bear, and elk. The elk were introduced to the area in 1986 in a cooperative project. Small populations of moose and brown bear also live in the area.

**(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 Modified Landscape, Scenic Viewshed, Timber Production, Old-growth Habitat, and Semi-remote Recreation.

| LUD | Acres |
|---|---|
| Modified Landscape | 12,457 |
| Scenic Viewshed | 10,499 |
| Timber Production | 25 |
| Old-growth Habitat | 5,517 |
| Semi-remote Recreation | 181 |

Most of this roadless area, approximately 80 percent, was allocated to a development LUD (Modified Landscape, Scenic Viewshed, Timber Production). Approximately 43 percent of the roadless area was allocated to the Modified Landscape LUD. The Scenic Viewshed LUD was assigned to approximately 37 percent of the roadless area. Less than 1 percent of the roadless area was allocated to the Timber Production LUD, located on the west border with the Mosman Roadless Area.

Approximately 20 percent of the roadless area was allocated to a non-development LUD (Old-growth Habitat and Semi-remote Recreation). The Old-growth Habitat LUD was assigned to approximately 19 percent of the roadless area. Approximately 1 percent of the roadless area was allocated to the Semi-remote Recreation LUD.

Beach logging has occurred along the east shore of Menefee Inlet, on the north shore of Southeast Cove, and west of Olive Cove. Present recreation use levels are low except at the mouths of some streams and at good anchorages. There is some subsistence use in the area.

**(6) Appearance (Apparent Naturalness):** Overall, the area has high scenic quality with a natural-appearing landscape. Zimovia Strait borders the area to the east. Portions of this roadless area are visible from boats traveling these waters. Beach logging has occurred along the east shore of Menefee Inlet, Southeast Cove, and west of Olive Cove. These modifications may be noticeable to some observers, especially those entering Menefee Inlet or Southeast Cove. However, a person in a boat approaching the roadless area would tend to see natural scenery. There is a mountain top electronic communication site located southwest of Olive Lake, between the South Etolin and Mosman Roadless Areas. This site includes equipment shelters, fuel tanks, diesel generators, and antenna towers that would be visible to people hiking near the site.

**(7) Surroundings (External Influences):** The area is part of the south portion of Etolin Island, which is unroaded. The Mosman Roadless Area and the South Etolin Wilderness border the area to the west and south, respectively. The area is bordered to the north by roads and associated harvest units. Thoms Place State Marine Park is located north across Zimovia Strait from the area. Boats traveling the adjacent waterways may be visible from within parts of the area, but are usually not intrusive. It is possible to see harvested areas and roads from some northern locations within this roadless area. However, the eastern portion is mostly natural appearing.

**(8) Attractions and Features of Special Interest:** The landform variety, including subalpine peaks, stream drainages, and lakes, is an attraction. The bays provide sheltered moorages and a sense of remoteness. The presence of elk is unique to Southeast Alaska. The area contains 6 inventoried recreation places, which cover 2,674 acres (9 percent) of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The boundaries of this area have changed in three ways since 1989. First, the majority of the southern portion of the 1989 roadless area is now designated as the South Etolin Wilderness. Second, beach-logged areas that were excluded from the 1989 roadless area are included within the boundaries of the 2003 area. Third, logging and road building has extended along Anita Bay on the northern edge of the area. As a result, part of the northern area that was within the 1989 roadless area is excluded from the boundary of the 2003 area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The majority of the area is unmodified. Approximately 98 percent of the area is natural appearing, where only ecological and geological change has occurred. However, beach logging has occurred along the east shore of Menefee Inlet, on the north shore of Southeast Cove, and west of Olive Cove. These are mostly natural appearing to the casual forest visitor because of the regrowth in the harvested areas. Although outside the roadless area, the lower portions of the watersheds in the western portion of the area are roaded and have been harvested. The presence of elk, which are a non-native species, affects the natural integrity of the area. There is an electronic communication site located on a mountaintop on the west edge of the area.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and primitive recreation within the area. The character of the area generally allows the visitor to feel remote from the sights and sounds of human activity. At times, low-flying aircraft may pass over, and the State ferry and boaters may pass next to the roadless area. All are generally non-intrusive. Present recreation use levels are low except at the mouths of some streams and at good anchorages. Generally, a person camped or traveling inland is unlikely to see others.

Travel within the area is challenging, requiring a high degree of woods skills and experience. 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 (especially around salmon streams in the fall) 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) | 6,587 | 23% |
| Semi-Primitive Non-Motorized (SPNM) | 12,545 | 44% |
| Semi-Primitive Motorized (SPM) | 6,093 | 21% |
| Roaded Natural (RN) | 2,005 | 7% |
| Roaded Modified (RM) | 1,449 | 5% |

The area contains 6 inventoried recreation places, which cover 2,674 acres (9 percent) of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPNM | 0 | 0 |
| SPM | 3 | 1,502 |
| RN | 2 | 1,005 |
| RM | 1 | 167 |

The area is accessible by boat from the community of Wrangell in 1 to 2 hours, and from Ketchikan in approximately 7 hours. Anchorages around the roadless area provide access to portions of the interior, as well as remove users from the open waters and traffic of Clarence Strait.

**(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 South Etolin Roadless Area was given a rating of 27 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 24. This rating reflects the developments adjacent to the area and the associated effects on the wilderness attributes of the area. When rated separately, the eastern portion of the roadless area received a score of 25 and the western portion of the roadless area received 23.

**(4) Ecologic and Geologic Values:** The majority of the area is forested. This area is part of a larger roadless area that includes the Mosman Roadless Area and the South Etolin Wilderness. The South Etolin Roadless Area accounts for approximately 28,678 acres of the larger area, which encompasses approximately 113,000 acres.

**(a) Fish Resources:** None of the VCUs were listed as primary salmon or sport fish producers (ADF&G, 1998).

Olive Creek, which extends into the South Etolin Roadless Area, has been identified as high quality habitat and is popular for steelhead and rainbow trout fishing. ADF&G has listed this creek as one of the 65 important watersheds for Southeast Alaska. The steelhead run in the creek is estimated to be 400 fish per year, and the pink salmon run averages 35,000 fish per year.

**(b) Wildlife Resources:** Important species include Sitka black-tailed deer, wolves, black bear, and elk. The elk were introduced to the area in 1986 in a cooperative project. Other species that use the area include moose, brown bear, river otter, marten, beaver, bald eagle, marbled murrelets, Canada goose, and red squirrel.

**(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 Wrangell Ranger District.

**(d) Karst, Cave, and other Geologic Resources:** There are no known karst, cave, or other geologic resources in the area.

**(5) Scientific and Educational Values:** There are opportunities to observe a variety of ecological and landform settings. Elk have been introduced to only a few islands in Alaska, and are present on the island. The area is accessible by boat from the community of Wrangell in 1 to 2 hours and is, therefore, potentially accessible to school-age children.

**(6) Scenic Values:** Overall, the area has high scenic quality with a natural-appearing landscape. Zimovia Strait borders the area to the east. Portions of this roadless area are visible from boats traveling these waters. Beach logging has occurred along the east shore of Menefee Inlet, Southeast Cove, and west of Olive Cove. These modifications may be noticeable to some observers, especially those entering Menefee Inlet or Southeast Cove. However, a person in a boat approaching the roadless area would tend to see natural scenery.

Visual Priority Routes and Use Areas identified by the Forest Plan that are located in or adjacent to the area, include Zimovia Strait and Ernest Sound, which are marine travel routes. Whaletail Cove, located on the northwest side of the peninsula, was identified as a saltwater use area.

About 28 percent of this roadless area is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type). Approximately 71 percent is inventoried as Variety Class B (possessing landscape diversity that is common for the character type).

The majority of this roadless area, 94 percent, has an Existing Visual Condition (EVC) Type I, where only ecological change has occurred to the landscape. Two percent of this roadless area is EVC Type III, where changes in the landscape seen by the average forest visitor, but a natural appearance remains dominant. Four percent is 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 Historic Values:** South Etolin Island was inhabited by several clans of the Stikine Tlingit. Evidence of their use includes several village sites and numerous fort sites, temporary camps, fish weirs, petroglyphs, and bark-stripped trees. Historic use of south Etolin Island was considerable and is represented by the remains of the first salmon hatchery in Alaska, as well as salteries, canneries, fox farms, trapping cabins, and other temporary camps.

The area is accessible by boat from the community of Wrangell in 1 to 2 hours, and from Ketchikan in approximately 7 hours. The area contains six inventoried recreation places. Present recreation use levels are low

except at the mouths of some streams and at good anchorages. One outfitter/guide reported using the area in 2000 for a total of 4 service days.

The Wildlife Analysis Area that includes this roadless area accounted for 5 to 10 percent of annual average Wrangell deer harvest during 1987 to 1994. The VCUs in this area were not included among the highest value community use areas nor were they listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998)

**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** The area encompasses the east peninsula of south Etolin Island, as well as a more centrally located area. The east peninsula portion of the area is for the most part bounded by saltwater. Both portions of the area are bounded to the north by a corridor with roads and harvest units. The adjacent Roadless Area 233 has a mix of LUDs that is similar to the South Etolin Roadless Areas, including Scenic Viewshed, Modified Landscape, and Old-growth Habitat. Further east and west, there are also areas allocated to the Timber Production LUD. The South Etolin Wilderness, which borders the area to the south and southwest, was allocated to the Wilderness LUD.

The area is irregularly shaped partly because of existing natural boundaries, particularly the natural inlets that separate South Etolin Island into a series of peninsulas. The area is, however, nearly split into two separate sections by the boundaries established for the South Etolin Wilderness and the roads and harvest units that border the area to the north. Designating this area wilderness would contribute to the existing South Etolin Wilderness Area and represent a logical extension of this existing wilderness area, especially the eastern portion.

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

**(1) Recreation, Including Tourism Potential:** There is potential for additional outfitter and guide permits, developed trails, and cabins or shelters. The elk population offers a unique hunting experience for Southeast Alaska.

**(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 proposed. Three fish barriers are located on the east side of the peninsula.

**(4) Wildlife Resources:** Opportunities for deer habitat improvement projects occur in the area. Elk habitat improvement projects may occur in the future as well.

**(5) Timber Resources:** There are approximatley 10,889 acres mapped as productive old growth in the roadless area. In addition, approximately 573 acres of second growth have resulted from logging activities along the east shore of Menefee Inlet, the north shore of Southeast Cove, and west of Olive Cove. Of these acres, 8,307 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), 3,204 acres (11 percent) of this roadless area are estimated to be suitable for timber production. Approximately 930 of the suitable acres are mapped as high-volume old growth; of these acres, 92 are mapped as high-volume, coarse-canopy old growth.

The area is included in the potential Snake timber sale, which is identified in the current Tongass National Forest 10-year action plan for harvest in 2010. Some areas are highly prone to strong winds, which blow down standing timber left exposed when adjacent stands are cut.

**(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 roadless area generally has a low minerals rating and there are no known current claims. The area contains an estimated 15,335 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 the area.

**(9) Water Availability and Use:** There are no developed recreation or other facilities located in this area. There are a number of cabins and home-sites located on private land near Olive Cove that may get domestic water from streams that originate within the roadless area.

**(10) Areas of Scientific Interest:** The area does not contain any Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** There is one special use authorization for the mountaintop electronic communication site.

**(12) Land Status:** All National Forest System lands are within the roadless area.

## 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 for recreational purposes by the citizens of Wrangell. There has been support for maintaining this area in a roadless condition. The elk transplant program is generally supported.

**(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 area south of the current South Etolin Roadless Area, which was part of this roadless area at that time. That area is now designated as the South Etolin Wilderness. In 2001, HR 2908 identified the current South Etolin Roadless Area as a proposed wilderness addition.

**(c) Public Input During Forest Plan Revision and Appeals:** South Etolin Island, Whale Tail Peninsula, and Menafee Inlet were specifically addressed in public input during the Forest Plan revision and appeal. Comments were concerned with timber harvest planned for the Whaletail Cove and Menafee Inlet areas, and in the viewshed of Thoms Place, which is located directly across Zimovia Strait from the area. Logging and roading these areas would affect the subsistence, recreation and scenic quality needs of Thom Place residents, as well as boaters and tourists in Zimovia Strait. In their comments on the 1991 Supplement, the Southeast Alaska Conservation Council included Whaletail/Menefee in their list of areas "meriting special management protection" for their outstanding wildlife, fisheries, hunting, fishing, subsistence, recreation and tourism values.

Representatives of the timber industry recommended that Management Area S23, which includes the South Etolin Roadless Area, be allocated to the Timber Production LUD. Another timber industry commenter recommended that, with the exception of some Scenic Viewshed or Modified Landscape along the ferry route, all of Management Area S23 should be allocated to the Timber Production LUD to keep timber harvest economic in these already-developed areas.

Olive Creek, which extends into the South Etolin Roadless Area, was identified in the September 25, 1997 appeal filed by the Narrows Conservation Coalition as an area of particular concern to the people in the Stikine area that was left unprotected by the 1997 Tongass Land and Resource Management Plan.

**(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, in combination with the Mosman (#233) Roadless Area and South Etolin Wilderness Area, would conserve valuable remaining undisturbed forested habitats on the island.

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 the Mosman and South Etolin roadless areas for wilderness designation and to be added to the South Etolin Wilderness.

The Wrangell Resource Council recommended this area as an addition to the South Etolin Wilderness.

Some individuals recommended this area for permanent protection as wilderness.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The south end of Etolin Island is roadless. The South Etolin Wilderness extends into the South Etolin Roadless Area and forms part of the area's south boundary. The Mosman Roadless Area forms part of the area's west boundary. The south portion of the island is separated from the North Etolin Roadless Area by a corridor of roads and associated timber management.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 50 | 65 |
| Wrangell (Pop. 2,308) | 20 | 25 |
| Petersburg (Pop. 3,224) | 50 | 55 |
| Juneau (Pop. 30,711) | 165 | 175 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The South Etolin Roadless Area is located on the east side of south Etolin Island. It encompasses the east peninsula, as well as a more centrally located portion of the island. The area is bordered to the east by Zimovia Strait, by forest roads and associated harvest units to the north, and by the Mosman Roadless Area to the west. The South Etolin Wilderness and Menefee Inlet extend north into the area. The roadless area is generally characterized by a series of rugged mountains, subalpine ridges, and glacial cirque lakes. Several of the mountains rise to over 3,000 feet. Numerous short streams drain the area. There are a number of lakes in the area. Several small islands separated by narrow bodies of water lie immediately east of the peninsula and are included in this roadless area.

The area is mostly natural appearing; however, the northern boundary is formed by developed areas. The natural integrity and apparent naturalness is very high for the area. The eastern portion was rated separately and the apparent naturalness was increased to outstanding. The western portion was rated separately and had high natural integrity and very high apparent naturalness. The opportunity for solitude and primitive recreation is very high for the area.

Approximately 28 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The landform variety, including subalpine peaks, stream drainages, and lakes, is an attraction. The presence of introduced elk is unique to Southeast Alaska, but is not a valuable attribute for wilderness.

The roadless area includes about 3,090 acres of high-volume, old-growth forest. Of these acres, 168 are mapped as high-volume, coarse-canopy old growth.

The South Etolin Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes up about 6 percent of the province. It is one of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The South Etolin 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.

The majority (70 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 in existing wilderness and 26 percent is protected in other non-development LUDs. The remainder (30 percent) of the roadless area is in the Etolin Granitics Ecological Subsection; this portion of the roadless area represents 10 percent of the entire ecological subsection, 37 percent of which is protected in existing wilderness and 19 percent is protected in other non-development LUDs.

The South Etolin 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 four other roadless areas) among the 109 Tongass inventoried roadless areas. When rated separately, the eastern portion of the roadless area scored 25 and the western portion of the roadless area rated 23.

There is considerable local and national support for managing the area in an unroaded condition, and some support for designation of the area as wilderness. Designation would create a wilderness with relatively good scenic values and that could extend the South Etolin Wilderness to the east. 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 Etolin Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 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. The land in the development LUDs provides an estimated 3,204 acres that are suitable for timber production (4 percent of the suitable acres on the Wrangell Ranger District). Approximately 92 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains an estimated 15,335 acres of undiscovered locatable mineral resources; all of the acres are considered to have low potential for development. The timber sales, recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area, including some of the high scenic values, could be affected by ongoing developments allowed by the Forest Plan.

Under Alternative 6, 7, or 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses 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, including the high scenic values, would be provided long-term protection if designated wilderness. Designation as wilderness would also extend the South Etolin Island Wilderness to the north and east.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 234 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | 28,658 | 28,658 | 28,678 |
| 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 | 5,517 | 5,517 | 5,517 | 5,517 | 5,517 | | | |
| Semi-remote Recreation | 181 | 181 | 181 | 181 | 181 | | 20 | |
| Recommended LUD II | | | | | | 20 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 10,499 | 10,499 | 10,499 | 10,499 | 10,499 | | | |
| Modified Landscape | 12,457 | 12,457 | 12,457 | 12,457 | 12,457 | | | |
| Timber Production | 25 | 25 | 25 | 25 | 25 | | | |
| **TOTAL** | **28,679** | **28,679** | **28,679** | **28,679** | **28,679** | **28,679** | **28,679** | **28,679** |
| Suitable Timber Lands | 3,204 | 3,204 | 3,204 | 3,204 | 3,204 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** West Zarembo (235)

**ACRES (NFS):** 8,544

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Kupreanof Lowlands

**2003 WILDERNESS ATTRIBUTE RATING:** 14

### I. Overview and Description

**(1) Location and Access:** The West Zarembo Roadless Area is located on the west side of Zarembo Island. It is approximately 5 miles southeast of Kupreanof Island and 25 miles west of the town of Wrangell. Wrangell is served by the Alaska Marine Highway and jet service. Clarence Strait lies to the southwest, Sumner Strait lies to the west and northwest, and the remainder of the area is bounded by roaded areas on Zarembo Island. Access is by boat or floatplane to Zarembo Island, then by traveling cross-country on foot or by using the road system to access the roadless area. The interior is also accessible by helicopter. There are no sites suitable for landing wheeled aircraft. The road system on Zarembo Island accesses many portions of the roadless area.

**(2) History:** Zarembo Island was used by the Stikine Tlingit clans for hunting and gathering of subsistence items. Their use is evidenced by several fish weirs and petroglyph sites along the west coast of the island. Historic use is evidenced by the remains of a log cabin. A narrow strip along the shoreline of the roadless area has been harvested extensively by beach logging, most of which occurred in the 1960s and early 1970s.

**(3) Geography and Topography:** The area is generally flat and slightly rolling. Two streams drain the area, and there are small freshwater lakes in the area. The flat muskegs rise to the east to timbered hillsides of elevations of about 1,000 feet. The area contains 14 miles of saltwater shoreline and 2 acres of small islands. There are no ice, alpine, or rock features mapped in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is characterized by rolling, subdued topography, and extensive muskeg areas, but may have localized, rugged terrain. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The West Zarembo Roadless Area is contained entirely within the Kupreanof Lowlands Ecological Section (M247G), represented by two ecological subsections (see table below). The Sumner Strait Volcanics Ecological Subsection represents the vast majority of the West Zarembo Roadless Area. Water-resistant volcanic flows of relatively recent origin arise from lowland glacial deposits. The interplay of volcanic and glacial forces have left a landscape of shallow organic soils on long, gentle slopes and mineral soils on short, steep slopes. Productive hemlock, Alaska yellow cedar, and spruce forests are found on the steep slopes (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kupreanof Lowlands | Sumner Strait Volcanics | 99% |
| | Duncan Canal Till Lowlands | 1% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes

with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg. No alpine soils are present.

**(c) Vegetation:** Vegetation of this roadless area primarily consists of typical spruce/hemlock forests. Low-lying, poorly-drained portions of the area are muskeg. Approximately 103 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 8,317 acres mapped as forest land of which 3,930 acres (47 percent) are mapped as productive old-growth forest. Of the productive old growth, approximately 438 acres or 11 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 78 acres of high-volume, coarse-canopy old growth. There are approximately 231 acres of second-growth forest where beach timber harvest has occurred.

**(d) Fish Resources:** There are 10 short Class I streams in this roadless area. These streams most likely contain pink and coho salmon, as well as steelhead.

**(e) Wildlife Resources:** A large population of Sitka black-tailed deer range over the roadless area. Other wildlife species common to Zarembo Island include wolf, black bear, moose, elk, beavers, river otters, Canada goose, marbled murrelets, goshawks, osprey and bald eagles. Brown bear and mountain goats do not occur on the island.

**(5) Management Direction and Current Uses:** The area was allocated to three different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These three LUDs include Timber Production, Old-growth Habitat and Semi-remote Recreation.

| LUD | Acres |
|---|---|
| Timber Production | 464 |
| Old-growth Habitat | 8,078 |
| Semi-remote Recreation | 2 |

Approximately 5 percent of the roadless area was allocated to one development LUD, Timber Production. This LUD is primarily located along the east boundary of the roadless area.

Most of this roadless area, 95 percent, is allocated to a non-development LUD (Old-growth Habitat, Semi-remote Recreation). The Old-growth Habitat LUD was assigned to approximately 95 percent of the roadless area. Less than 1 percent of the roadless area was allocated to the Semi-remote Recreation LUD, located on small islands off the cost of the area.

There are no developed recreation sites, nor is there frequent use of the area by local guides or outfitters. There is some subsistence use, especially in the more accessible portions of the roadless area. Salvage logging has occurred along the shoreline.

The current Tongass National Forest 10-year action plan schedules the Baht timber sale for part of this area in 2005-2006.

**(6) Appearance (Apparent Naturalness):** The area appears unmodified; however, older beach logging and adjacent development in upland areas have affected parts of the area's natural appearance to some extent.

**(7) Surroundings (External Influences):** The roadless area is on Zarembo Island, which is an area of development primarily for timber management activities, and includes a road network. Clarence Strait lies to the

southwest, Sumner Strait lies to the west and northwest, most of the area to the southeast is in an old-growth reserve, and most of the area to the east and northeast is allocated for timber management. Timber harvest areas, roads, and reforested plantations are adjacent to the roadless area on the east side. When harvesting activities occur adjacent to or near the roadless area, the sights and sounds may create an affect. Boats plying the adjacent saltwater may be visible from within parts of the roadless area but usually are not intrusive. Low-flying aircraft may temporarily distract visitors in the area.

**(8) Attractions and Features of Special Interest**: The scenery of the area is typical of much of the lowlands of Southeast Alaska. The area contains four inventoried recreation places, which cover 2,353 acres (28 percent) of the roadless area. There are no areas of special interest.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** There have been refinements to the boundary of the roadless area where it occurs along developed areas. The roadless area has been extended north and now includes Point St. John and area along the shore north to the inlet where beach logging has been done in the past.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is generally unmodified. Development activities outside of the roadless area, but within the higher reaches of area watersheds, may have altered some of the natural processes. The area is bounded on one side by land managed for timber. The other side is primarily beachfront, some of which has been beach logged in the past (1960s).

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a low opportunity for solitude within the area. Low-flying airplanes and recreational boaters may at times pass nearby and be observed by people in this roadless area. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the community of Petersburg in about 3 hours and from Wrangell in approximately 2 hours. Present recreation use levels are low. Generally, a person camped or traveling inland is unlikely to see others. Periodic timber harvest activities in the adjacent areas would have a significant impact on the opportunity for solitude.

Travel within the area is not particularly challenging, requiring only moderate woods skills and experience. The majority of the area is within 3 miles of a road. The presence of black bears adds to the challenge and needs for woods skills.

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) | 5,842 | 68% |
| Roaded Modified (RM) | 2,702 | 32% |

The area contains four inventoried recreation places, which cover 2,353 acres (28 percent) of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| SPNM | 0 | 0 |
| RM | 4 | 2,353 |

There are no developed recreation opportunities 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 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 West Zarembo Roadless Area was given a rating of 19 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 14. This rating reflects the developments adjacent to the area and their effects on wilderness attributes.

**(4) Ecologic and Geologic Values:**

**(a) Fish Resources:** Neither of the VCUs are listed as primary producers of salmon or sport fish by the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998).

There are 10 short Class I streams in this roadless area. These streams most likely contain pink and coho salmon as well as steelhead.

**(b) Wildlife Resources:** The area supports a large population of Sitka black-tailed deer. Elk have recently colonized the island, but populations are low. Also, wolves, black bear, moose, and other wildlife species use the area. Other wildlife species common to Zarembo Island include beaver, river otters, Canada geese, marbled murrelets, goshawks, osprey and bald eagles. Brown bear and mountain goats do not occur in 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 Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There do not appear to be any carbonate rock formations in the area, which are a necessary requirement for Karst. There are no glaciers or unique geologic features in this area.

**(5) Scientific and Educational Values:** There are opportunities to study wildlife, ecology, and the forces and processes that form the topography of the area.

**(6) Scenic Values:** The area generally appears unmodified from saltwater; however, adjacent timber harvest units have affected the natural appearance of adjacent roadless areas. The visual character type of this area is Kupreanof Lowland, characterized by islands of rolling terrain exhibiting gradual relief separated by an intricate network of waterways. Numerous small rocky islands, shorelines and rock reefs are evident from Sumner Strait.

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.

About 11 percent of the area was inventoried as Variety Class B (possessing landscape diversity that is common for the character type). The majority of the area, 88 percent, was inventoried as Variety Class C (possessing a low degree of landscape diversity).

The majority of the roadless area, 75 percent, is inventoried as Existing Visual Condition (EVC) Type I, where the landscape appears to be untouched by human activity. Seventeen percent of the area is inventoried as EVC IV, in which changes to the landscape are easily noticed by the average person. About 8 percent 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:** Zarembo Island was used by all of the Stikine Tlingit clans for hunting and gathering of subsistence items. Their use of western Zarembo Island is indicated by the reported remains of several fish weirs and petroglyphs. Historic use is evidenced by the remains of a log cabin. There has been some salvage and beach logging along the shore. The area is used for subsistence hunting and gathering by the people of Wrangell (25 miles by boat) and, to a lesser extent, by residents of Petersburg (30 miles by boat), especially in the more accessible portions of the roadless area. The VCUs of the area were not listed among the VCUs with the highest community use values. However, they were listed in the second tier of high value VCUs and were listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is bounded on one side by land managed for timber. The other side is primarily beachfront, some of which has been logged in the past. Feasibility of managing the area as a wilderness is affected by its narrowness (most of it is within 3 miles of a road) and the fact that the upper reaches of most of its watersheds are developed.

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

**(1) Recreation, Including Tourism Potential:** There is some potential for outfitter and guide permits and for developed trails, cabins, or shelters.

**(2) Subsistence Uses:** The existing patterns of subsistence activities in the area would generally not be affected by wilderness designation or management in an unroaded condition. Limited motorized use of the road system occurs by Wrangell residents; however, the road system is outside the current roadless area boundary. Subsistence users, commenting on the proposed Skipping Cow Timber Sale on the southern portion of Zarembo Island, were divided on whether maintaining the area in a roadless condition or building roads and harvesting timber would improve or harm subsistence use.

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

**(4) Wildlife Resources:** There are some wildlife habitat enhancement projects planned for this area, including thinning of previously harvested areas in the beach fringe.

**(5) Timber Resources:** There are approximately 3,930 acres mapped as productive old growth in the roadless area. In addition, 231 acres of second growth have resulted from beach logging. Of this area, there are 2,623 acres inventoried as tentatively suitable for harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 68 acres or less than 1 percent of this roadless area are estimated to be suitable for timber production. Approximately 21 of the suitable acres are mapped as high-volume old growth; none of the acres are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area is dependent on high market values. A road system is already present nearby and could be extended into parts of this area. Two sites for transferring logs to saltwater are already present on Zarembo Island. The current Tongass National Forest 10-year action plan schedules the Baht timber sale for this area in 2005-2006.

**(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 roadless area contains an estimated 8,544 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 road system is already present nearby and could be extended into this area. Two sites for transferring logs to saltwater are already present; St. John Harbor and Roosevelt Harbor. No utility corridors are planned within the roadless area.

**(9) Water Availability and Use:** No developed recreation 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:** The area does not contain any Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** There are no special uses in the area, except for a Coast Guard lighthouse reservation.

**(12) Land Status:** All of the land within this roadless area is part of the National Forest System.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Some Wrangell residents generally favor road building and timber harvest, but there is also some interest in maintaining the area in an unroaded condition. Most use of the area is recreational, and occurs along the beach fringe or near the existing road system.

**(b) Congressional Interest:** In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness. The bill did not include this area. In 2001, HR 2908 did not propose this area for wilderness, but it did propose that most of the area be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

**(c) Public Input During Forest Plan Revision and Appeals:** Comments received from the timber industry favored managing all of Zarembo Island in Timber Production to allow for a sustainable, economic timber sale program. Specific comments recommended continued roadless status for Roadless Area 237 (South Zarembo), but no roadless recommendations were made for this area.

**(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review:** No specific comments were received for this area from the public during the Roadless Area Conservation Rule process or during the 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 specific comments were received on this area.

**(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 Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 235 for permanent protection as LUD II. SEACC recommended the remaining unlogged portions of Woronkofski, Zarembo, and North Etolin Islands be safeguarded through LUD II protection.

**(2) Nearby Roadless and Wilderness Areas and Uses:** Two other roadless areas exist on Zarembo Island—East Zarembo Roadless Area and South Zarembo Roadless Area. These roadless areas are all separated from each other by areas developed for timber management. Recreational use is light in all of the roadless areas on Zarembo Island, although subsistence deer hunting occurs.

**(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) | 25 | 30 |
| Petersburg (Pop. 3,224) | 25 | 30 |
| Juneau (Pop. 30,711) | 140 | 150 |

Petersburg and Wrangell are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The West Zarembo Roadless Area is located on the west side of Zarembo Island. It is 5 miles southeast of Kupreanof Island and 25 miles west of the town of Wrangell. Clarence Strait lies to the southwest, Sumner Strait lies to the west and northwest, and the remainder of the area is bounded by roaded areas on Zarembo Island. The area is generally flat and slightly rolling. Two streams drain the area, and small freshwater lakes account for about 100 acres. The flat muskegs rise to the east to timbered hillsides of elevations of about 1,000 feet.

The area is mostly natural appearing; however, it is heavily influenced by developments on the east side of the roadless area. The natural integrity and apparent naturalness is moderate. The opportunity for solitude and primitive recreation is low in the area.

None of the area is rated as distinctive for the character type from a scenery perspective.

There are introduced elk on the island, which is unique to Southeast Alaska, but not valuable for wilderness. There are no other known significant or unique features in the area.

The roadless area includes about 438 acres of high-volume, old-growth forest. Of these acres, 78 are mapped as high-volume, coarse-canopy old growth.

The West Zarembo Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes about 2 percent of the province. It is one of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The West Zarembo 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 vast majority (99 percent) of the roadless area is in the Sumner Strait Volcanics Ecological Subsection; this portion of the roadless area represents 2 percent of the entire ecological subsection, minor portions of which are protected by existing wilderness and LUD II (0.1 percent and 1 percent, respectively) and by other existing non-development LUDs (32 percent). The balance (1 percent) of the roadless area is in the Duncan Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents less than 0.1 percent of the entire ecological subsection, of which, 5 percent is protected in existing wilderness and 35 percent in other existing non-development LUDs.

The West Zarembo 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 two other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some support for managing this roadless area in an unroaded condition, but very little support for designating it as wilderness. Designation would create a wilderness with few unique or significant attributes and that is heavily influenced by adjacent developed areas. However, designation of the area would add Congressional protection to approximately 2 percent of the Sumner Strait Volcanics Ecological Subsection that 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 very low.

## V. Environmental Consequences

The West Zarembo Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 95 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 5 percent. The land in the development LUDs provides an estimated 68 acres that are suitable for timber production (less than 1 percent of the suitable acres on the Wrangell Ranger District). None of the suitable acres are high-volume, coarse-canopy old growth. The roadless area contains an estimated 8,544 acres of undiscovered locatable mineral resources; all of the acres are considered to have low potential for development. The timber sales, 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, however most of the area is managed for old growth habitat under the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. No timber harvest would be allowed. Designation of the area as LUD II would add Congressional protection to approximately 2 percent of the Sumner Strait Volcanics Ecological Subsection that is not currently represented in wilderness or LUD II. 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. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area as wilderness would add Congressional protection to approximately 2 percent of the Sumner Strait Volcanics Ecological Subsection that is not currently represented in wilderness or LUD II. 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 235 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 8,544 |
| 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 | 8,078 | 8,078 | 8,078 | 8,078 | 8,078 | | 8,078 | |
| Semi-remote Recreation | 2 | 2 | 2 | 2 | 2 | | 2 | |
| Recommended LUD II | | | | | | 8,544 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | 464 | 464 | 464 | 464 | 464 | | 464 | |
| **TOTAL** | **8,544** | **8,544** | **8,544** | **8,544** | **8,544** | **8,544** | **8,544** | **8,544** |
| Suitable Timber Lands | 68 | 68 | 68 | 68 | 68 | 0 | 68 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** East Zarembo (236)

**ACRES (NFS):** 16,175

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Kupreanof Lowlands and Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 14

### I. Overview and Description

**(1) Location and Access:** The East Zarembo Roadless Area is located on the northeast side of Zarembo Island. It is about 5 miles south of Mitkof Island and 15 miles west of the town of Wrangell. Wrangell is served by the Alaska Marine Highway and jet service. Sumner Strait lies to the north and Stikine Strait to the east. Access is by boat or floatplane to Zarembo Island, then by traveling cross-country on foot or by using the road system to access the roadless area. The area can also be accessed by helicopter. There are no sites suitable for landing wheeled aircraft. The road system on Zarembo Island surrounds the roadless area and accesses many portions of it. Some hunters are using ATVs to access portions of the roadless area by driving off the roads through muskeg areas.

**(2) History:** Zarembo Island was shared by all of the Stikine Tlingit clans for hunting and gathering of subsistence items. There are, however, no sites currently recorded within the roadless area. There is no evidence of historic use, such as cabins or timber harvest, except along the shore. Extensive timber harvest and road building has occurred in all areas surrounding the roadless area.

**(3) Geography and Topography:** The terrain is generally rolling, although mountains exceeding 2,000 feet rise in the northeastern portion of the area. Several streams drain the area, and there are approximately 75 acres of small ponds and lakes. Elevation ranges from 200 to over 2,000 feet. The area does not contain any saltwater shoreline. This area has 30 acres of alpine tundra but no mapped acres of ice or rock features.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is generally characterized by rolling, subdued topography and extensive muskeg areas, but may have localized, rugged terrain. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The East Zarembo Roadless Area is contained mostly within the Kupreanof Lowlands Ecological Section (M247G) and also contains portions within the Inside Passage Fjordlands Ecological Section (M247E). These areas are represented by three ecological subsections (see table below). The Duncan Canal Till Lowlands Ecological Subsection, covering the majority of the East Zarembo Roadless Area, is characterized by low relief, high precipitation, and depositional soils which have produced an abundance of wetlands on poorly drained sites. Productive forests are limited to slopes and riparian areas with mineral soil. The balance of the roadless area, approximately 31 percent, lies within the Wrangell Narrows Metasediments Ecological Subsection. Mountains of sedimentary origin have been extensively reshaped by glaciers and glacial deposition. Slopes are forested with hemlock, spruce, and cedar while lodgepole pine and mixed-conifer stands are found in poorly drained soils. Wetlands are common in low relief, depositional areas. Thick peat deposits have accumulated in some sites with poor drainage (Nowacki et al., (2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kupreanof Lowlands | Duncan Canal Till Lowlands | 69% |
| | Sumner Strait Volcanics | <1% |
| Inside Passage Fjordlands | Wrangell Narrows Metasediments | 31% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

**(c) Vegetation:** Vegetation of this roadless area primarily consists of typical spruce and hemlock forests. Approximately 207 acres are mapped as muskeg; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 15,658 acres mapped as forest land of which 7,113 acres (45 percent) are mapped as productive old-growth forest. Of the productive old growth, approximately 2,531 acres (36 percent) are mapped as high-volume, old-growth forest. The productive old growth includes about 912 acres of high-volume, coarse-canopy old growth. There is no mapped second-growth forest where timber harvest has occurred.

**(d) Fish Resources:** Fish resources have been rated by the Alaska Department of Fish and Game in its Forest Habitat Integrity Program (1983). These ratings describe the value of VCUs for sport fish, commercial fish, and estuaries. VCU 459 is rated as having a highly valued estuary, though this roadless area contributes little to that rating. VCUs 456 and 459 have been listed as secondary producers of salmon by the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998).

**(e) Wildlife Resources:** Sitka black-tailed deer, wolves, elk, moose, and black bear range over the roadless area. Other wildlife species occurring on Zarembo Island include beaver, river otters, Canada goose, marbled murrelets, goshawks, osprey and bald eagles. Brown bear and mountain goats do not occur.

**(5) Management Direction and Current Uses:** The area was allocated to three 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 | 10,368 |
| Scenic Viewshed | 3,968 |
| Old-growth Habitat | 1,839 |

Approximately 89 percent of the roadless area was allocated to a development LUD (Timber Production and Scenic Viewshed). The Timber Production LUD was assigned to approximately 64 percent of the roadless area. Approximately 25 percent of the roadless area was allocated to the Scenic Viewshed LUD, located mostly in the eastern portion of the area.

Approximately 11 percent of the roadless area was allocated to one non-development LUD, Old-growth Habitat. This LUD is located in the northeast corner of the roadless area.

There are no developed recreation sites, nor is there frequent use of the area by local guides or outfitters. There is substantial subsistence use, especially in the more accessible portions of the roadless area.

**(6) Appearance (Apparent Naturalness):** The area appears unmodified from the Visual Priority Routes, which include Stikine Strait and Sumner Strait, which are part of the Alaska Marine Highway and tour ship routes. However, extensive management activity in the adjacent areas have significantly affected the apparent naturalness of this roadless area.

**(7) Surroundings (External Influences):** This roadless area is located on Zarembo Island where timber management activities occur and a extensive road network is found. Timber harvest areas and reforested plantations generally surround the roadless area. When harvesting activities occur adjacent to or near the roadless area, their sights and sounds may create an impact. The majority of the roadless area is within 2 miles of a road. Boats plying the nearby saltwater may be visible from within parts of the roadless area but usually are not intrusive. Low-flying aircraft may temporarily distract visitors in the area.

**(8) Attractions and Features of Special Interest:** The scenery of the area is typical of much of the lowlands of Southeast Alaska. The area contains 5 inventoried recreation places, which cover 2,981 acres (18 percent) of the roadless area. There are no areas of special interest.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The roadless area has been expanded to reflect more consistent mapping of roads and harvest units. Overall, the size of the area has increased, but the integrity of the roadless area has not. Several smaller, irregular shaped areas were excluded between the Draft and Final SEIS to improve the manageability of the area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is unmodified, although adjacent areas have been extensively modified. Development outside of the roadless area, but within the drainages, may have altered some of the natural processes. This impact is considered low, except in areas close to timber management activities. The area is adjacent to land managed for timber on all sides. A little over half of the area appears to be untouched by human influences. However, timber activity on adjacent land creates the appearance of modification on much of the area and negatively affects the suitability for wilderness classification. Unregulated ATV use has created several unplanned travel routes off the roads and across muskegs into the roadless area.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a moderate opportunity for solitude within the area. Low-flying airplanes and recreational boaters may at times pass nearby and be observed by people in this roadless area. Present recreation use levels are low. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the community of Petersburg in about 3 hours and from Wrangell in approximately 2 hours. Generally, a person camping or traveling inland is unlikely to see others. Periodic timber harvest activities in the adjacent areas would have a significant impact on the opportunity for solitude when they are occurring.

Travel within the area is not particularly challenging, requiring only moderate woods skills and experience. The majority of the area is within 2 miles of a road. 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 recreation opportunities in a roaded 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 |
|---|---|---|
| Roaded Modified (RM) | 16,175 | 100% |

The area contains 5 inventoried recreation places, which cover 2,981 acres (18 percent) of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| RM | 5 | 2,981 |

There are no developed recreation opportunities 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 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 East Zarembo Roadless Area was given a rating of 19 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 14. This rating reflects the effects of adjacent developments and activities on wilderness attributes.

**(4) Ecologic and Geologic Values:** There are no known special features in this roadless area

**(a) Fish Resources:** None of the VCUs in the area are listed as primary salmon or sport fish producers (ADF&G, 1998). Streams in this area most likely contain pink and coho salmon as well as steelhead.

**(b) Wildlife Resources:** Sitka black-tailed deer, wolves, and black bear range over the roadless area. Elk have recently colonized the island, but populations are low. Other wildlife species common to Zarembo Island include moose, beaver, river otters, Canada goose, marbled murrelets, goshawks, osprey and bald eagles. Brown bear and mountain goats have not been reported in this area.

**(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 East Zarembo 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, eight sensitive plant species are known or suspected to occur in the Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There do not appear to be any carbonate rock formations, a necessary requirement for karst, in the area. There are no glaciers or unique geologic features.

**(5) Scientific and Educational Values:** The area contains no Research Natural Areas and has not been identified for any other scientific value. There are opportunities to study forests, fish, wildlife, and geology processes in the area.

**(6) Scenic Values:** The visual character type of this area is Kupreanof Lowland, characterized by islands of rolling terrain exhibiting gradual relief separated by an intricate network of waterways. Numerous small rocky islands, shorelines and rock reefs are evident.

Visual Priority Routes and Use Areas identified by the Forest Plan, that area within or adjacent to the area include Stikine Strait and Sumner Strait, which are part of the Alaska Marine Highway and tour ship routes.

Most of the roadless area, 84 percent, is inventoried as Variety Class B (possessing landscape diversity that is common for the character type). Approximately 17 percent of the area is in Variety Class C (possessing landscape characteristics common for the character type).

About 30 percent of the area is in Existing Visual Condition (EVC) I; where the landscape appears to be untouched by human activity. Seven percent of the area is in EVC IV, in which changes to the landscape are easily noticed by the average person and may attract some attention. They appear to be disturbances but resemble natural patterns. Much of the area, 63 percent, has an EVC V, where changes to the landscape are obvious to the average person and appear to be major disturbances.

**(7) Social, Cultural, and Historical Values:** Zarembo Island was shared by all of the Stikine Tlingit clans for hunting and gathering of subsistence items. There are; however, no sites currently recorded for this roadless area. The absence of sites may reflect the elevation and distance from the beach. Recreation use is low, no outfitter/guide permits were issued in 2000. The area is used for subsistence hunting and gathering by the people of Wrangell and, to a lesser extent, Petersburg, especially in the more accessible portions of the roadless area. VCU 457, the northwestern portion of the roadless area, was listed in the second tier among VCUs with the highest community use values. The VCUs that include the majority of the roadless area were not listed among the high value VCUs. VCUs 456 and 457 on the northern coast account for about half of the roadless area and were listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is bounded on all sides by land that is roaded and managed for timber; it does not border any other roadless areas. Harvesting patterns and road development have resulted in no naturally defined roadless area boundaries, such as a ridgelines, drainages, or saltwater. Unregulated ATV use has created several unplanned travel routes off the roads and across muskegs into the interior of the roadless area. While the size of the roadless area has been increased, the integrity of the roadless area has not. Therefore, the feasibility of managing the area as wilderness is very low.

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

**(1) Recreation, Including Tourism Potential:** There is some potential for outfitter/guide permits and for developed trails, cabins, or shelters.

**(2) Subsistence Uses:** The existing patterns of subsistence activities in the area would generally not be affected by wilderness designation or management in an unroaded condition. Motorized use of the road system occurs by Wrangell and Petersburg residents; however, the road system is outside the current roadless area boundary. Motorized activity is occurring within the roadless area at locations where people are able to drive ATVs off the road system through open muskegs. Subsistence users, commenting on the proposed Skipping Cow Timber Sale on the southern portion of Zarembo Island, were divided on whether maintaining the area in a roadless condition or building roads and harvesting timber would improve or harm subsistence use.

**(3) Fish Resources:** There are no fish habitat enhancement projects planned in this area. Fish passage has been improved on both Meter Bight and St. John Creeks.

**(4) Wildlife Resources:** There are no wildlife habitat enhancement projects planned in this area.

**(5) Timber Resources:** There are approximately 7,113 acres mapped as productive old growth. There are no acres mapped as second growth due to timber harvest. Of this area, 4,916 acres are defined as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 2,490 acres (15 percent) of this roadless area are estimated to be suitable for timber production. Approximately 856 of the suitable acres are mapped as high-volume old growth; of these acres, 203 are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area is dependent on high market values. A road system is already present nearby and could be extended into parts of this area. Two sites for transferring logs to saltwater are already present on Zarembo Island.

**(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 roadless area contains 1,940 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, The roadless area contains an estimated 4,994 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:** Any new roads would be for timber management, rather than arterial roads. No utility corridors are located in the roadless area.

**(9) Water Availability and Use:** No developed recreation 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:** The area contains no inventoried potential Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** There are no special uses in the area.

**(12) Land Status:** All land in the roadless area are part of the National Forest System. The State of Alaska has selected lands near St. John harbor adjacent to this roadless area, but that selection has not yet been conveyed to the state.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Some Wrangell residents generally favor road building and timber harvest, but there is also some interest in maintaining the area as unroaded.

**(b) Congressional Interest:** In 1989, U.S. House of Representatives Bill HR 987 proposed designating 23 areas as wilderness. The bill did not include this area. In 2001, HR 2908 did not propose this area for wilderness, but it did propose that the majority of the area be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

**(c) Public Input During Forest Plan Revision and Appeals:** Comments received from the timber industry favored managing all of Zarembo Island in Timber Production to allow for a sustainable, economic timber sale program. Specific comments recommended continued roadless status for Roadless Area 237 (South Zarembo), but no roadless recommendations were made for this area.

**(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review:** No specific comments were received for this area from the public during the Roadless Area Conservation Rule process or during the 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 specific comments were received on this area. No specific comments were received on this area.

**(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 the remaining unlogged portions of Woronkofski, Zarembo, and North Etolin Islands be safeguarded through LUD II protection. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 236 for permanent protection as LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** Two other roadless areas exist on Zarembo Island. These are West Zarembo and South Zarembo. None of these roadless areas are adjacent to each other, as they are separated by areas managed for timber. Recreational use is light in all of the roadless areas on the island, although subsistence deer hunting occurs.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 75 | 95 |
| Wrangell (Pop. 2,308) | 15 | 20 |
| Petersburg (Pop. 3,224) | 25 | 30 |
| Juneau (Pop. 30,711) | 145 | 150 |

Petersburg and Wrangell are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The East Zarembo Roadless Area is located on the northeast side of Zarembo Island. Sumner Strait lies to the north and Stikine Strait to the east. The roadless area is characterized by generally rolling terrain. Several streams drain the area, and there are approximately 75 acres of small ponds and lakes. Elevation ranges from 200 to over 2,000 feet.

The area is heavily influenced by developments in adjacent areas. The natural integrity of the area is low, and the apparent naturalness is moderate. The opportunity for solitude is low and the opportunity for primitive recreation is moderate.

None of the roadless area is rated as distinctive for the character type from a scenery perspective. There are introduced elk on the island, which is unique to Southeast Alaska, but not a valuable wilderness attribute.

There are no other known features of ecologic, geologic, scientific, or cultural significance in the area.

The roadless area includes about 2,531 acres of high-volume, old-growth forest. Of these acres, 912 are mapped as high-volume, coarse-canopy old growth.

The East Zarembo Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes about 3 percent of the province. It is 1 of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The East Zarembo Roadless Area lies within two ecological sections; it represents 1 percent of the Kupreanof Lowlands Ecological Section and 0.3 percent of the Inside Passage Fjordlands Ecological Section. A minor portion of Kupreanof Lowlands Ecological Section is in existing wilderness or LUD II (1 percent in each), while 33 percent is protected by other existing non-development LUDs. Approximatley 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 majority (69 percent) of the roadless area is in the Duncan Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents 5 percent of the entire ecological subsection, of which, 5 percent is in existing wilderness and 35 percent is in other existing non-development LUDs. Wrangell Narrows Metasediments Ecological Subsection accounts for 31 percent of the roadless area; this portion of the roadless area represents 2 percent of the entire ecological subsection, which is protected by existing wilderness (11 percent) and other existing

non-development LUDs (18 percent). The remaining 0.1 percent of the roadless area is in Sumner Strait Volcanics Ecological Subsection. This portion of the roadless area represents less than 0.1 percent of the entire ecological subsection, minor portions of which are protected by existing wilderness and LUD II (0.1 percent and 1 percent, respectively) and by other existing non-development LUDs (32 percent).

The East Zarembo 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 support for managing this roadless area in an unroaded condition, but very little support for designating it as wilderness. Designation would create a wilderness with few unique or significant attributes and that is heavily influenced by adjacent developed areas. 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 East Zarembo Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 11 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 89 percent. The land in the development LUDs provides an estimated 2,490 acres that are suitable for timber production (4 percent of the suitable acres on the Wrangell Ranger District). Approximately 203 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains 1,940 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. The roadless area also contains an estimated 4,994 acres of undiscovered locatable mineral resources; all of the acres are considered to have low potential for development. The timber sales, 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 allowed by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. 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.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses 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.

# Appendix C

| Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 236 (in acres) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Land Use Designation** | **Alt 1** | **Alt 2** | **Alt 3** | **Alt 4** | **Alt 5** | **Alt 6** | **Alt 7** | **Alt 8** |
| **Recommended Wilderness** | | | | | | | | 16,175 |
| **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** | 1,839 | 1,839 | 1,839 | 1,839 | 1,839 | | 1,839 | |
| **Semi-remote Recreation** | | | | | | | | |
| **Recommended LUD II** | | | | | | 16,175 | | |
| **LUD II** | | | | | | | | |
| **Wild, Scenic, Recreational River** | | | | | | | | |
| **Experimental Forest** | | | | | | | | |
| **Scenic Viewshed** | 3,968 | 3,968 | 3,968 | 3,968 | 3,968 | | 3,968 | |
| **Modified Landscape** | | | | | | | | |
| **Timber Production** | 10,368 | 10,368 | 10,368 | 10,368 | 10,368 | | 10,368 | |
| **TOTAL** | **16,175** | **16,175** | **16,175** | **16,175** | **16,175** | **16,175** | **16,175** | **16,175** |
| **Suitable Timber Lands** | 2,490 | 2,490 | 2,490 | 2,490 | 2,490 | 0 | 2,490 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** South Zarembo (237)

**ACRES (NFS):** 41,999

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Kupreanof Lowlands and Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 20

### I. Overview and Description

**(1) Location and Access:** The South Zarembo Roadless Area is located on the south side of Zarembo Island. It is less than 5 miles west of Etolin Island and approximately 15 miles west of the town of Wrangell, which is served by the Alaska Marine Highway and jet service. Stikine Strait borders the area on the east and south and Clarence Strait lies to the southwest. Access is by boat or floatplane to Zarembo Island, then by traveling cross-country on foot or by using the road system to access the roadless area. The interior is also accessible by helicopter. A portion of the roadless area is also accessible from saltwater. There are no sites suitable for landing wheeled aircraft. The road system on Zarembo Island accesses the northern and western edges of the roadless area and portions of the interior. Some hunters are using ATVs to access portions of the roadless area by driving off the roads through muskeg or alpine areas.

**(2) History:** Zarembo Island was used by all of the Stikine Tlingit clans for hunting and gathering of subsistence items. Their use of southern Zarembo Island is indicated by the reported remains of a village site, as well as recorded burial sites, fish weirs, petroglyphs, and pictographs. Historic use is evidenced by the remains of several cabins and by earlier timber harvests along the beach.

**(3) Geography and Topography:** The area has moderately rolling terrain. Several streams drain the area. Elevation ranges from sea level to 2,500 feet. The area contains approximately 29 miles of shoreline on saltwater and 10 acres of small islands. The area also contains 251 acres of alpine tundra. There are no ice, snow or rock features mapped in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is characterized by rolling, subdued topography and extensive muskeg areas, but may have localized, rugged terrain. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The South Zarembo Roadless Area is contained mostly within the Kupreanof Lowlands Ecological Section (M247G) and also contains portions within the Inside Passage Fjordlands Ecological Section (M247E). These areas are represented by three ecological subsections (see table below). The Sumner Strait Volcanics Ecological Subsection represents the majority of the South Zarembo Roadless Area. Water-resistant volcanic flows of relatively recent origin arise from lowland glacial deposits. The interplay of volcanic and glacial forces have left a landscape of shallow organic soils on long, gentle slopes and mineral soils on short, steep slopes. Productive hemlock, Alaska yellow cedar, and spruce forests are found on the steep slopes. Most of the balance of the roadless area, 39 percent, lies within the Stikine Strait Complex Ecological Subsection, a combination of glacially carved volcanic or sedimentary rock and glacial deposition in the valleys. Wetlands and low productivity forests cover much of the Stikine Strait Complex Ecological Subsection (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kupreanof Lowlands | Sumner Strait Volcanics | 58% |
| | Duncan Canal Till Lowlands | 3% |
| Inside Passage Fjordlands | Stikine Strait Complex | 39% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry. Poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg. Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

**(c) Vegetation:** Vegetation of this roadless area primarily consists of typical spruce and hemlock forests. Low-lying, poorly-drained portions of the area are muskeg. Hillsides with steeper slopes have more productive forests. 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.

There are approximately 41,124 acres mapped as forest land of which 17,277 acres (42 percent) are mapped as productive old-growth forest. Of the productive old growth, approximately 3,542 acres (21 percent) are mapped as high-volume, old-growth forest. The productive old growth includes about 590 acres of high-volume, coarse-canopy old growth. There are approximately 636 acres of second-growth forest where beach timber harvest has occurred.

**(d) Fish Resources:** Fish resources have been rated as part of the Alaska Department of Fish and Game in its Forest Habitat Integrity Program (1983). These ratings describe the-value of VCUs for sport fish, commercial fish, and estuaries. VCUs with highly valued estuaries include 457 and 459. VCUs 458 and 459 have been listed as secondary producers of salmon by the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998).

**(e) Wildlife Resources::** The area supports a sizeable population of Sitka black-tailed deer. Wolves and black bear range over the roadless area. Other wildlife species that occur here include moose, elk, beaver, river otters, Canada goose, sandhill cranes, marbled murrelets, goshawks, and bald eagles.

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

| LUD | Acres |
|---|---|
| Timber Production | 21,696 |
| Scenic Viewshed | 1,323 |
| Old-growth Habitat | 18,970 |
| Semi-remote Recreation | 10 |

Approximately 55 percent of the roadless area was allocated to a development LUD (Timber Production and Scenic Viewshed). The Timber Production LUD was assigned to approximately 52 percent of the roadless area. The Timber Production LUD primarily includes the Nesbitt and Vial Creek drainages and a portion of the upper Middle Meter Bight drainage. Approximately 3 percent of the roadless area was allocated to the Scenic Viewshed LUD, located mostly in the southern portion of the area.

Approximately 45 percent of the roadless area was allocated to a non-development LUD (Old-growth Habitat and Semi-remote Recreation). The Old-growth Habitat LUD was assigned to approximately 45 percent of the roadless area. Most of this LUD is located in the Round Point Old-Growth Reserve in the southeast portion of the area. The remainder of this LUD is in the Snow Pass Old-Growth Reserve in the northwest portion of the area. Less than 1

percent of the roadless area was allocated to the Semi-remote Recreation LUD, located on the small island off the coast of Zarembo Island.

There are no developed recreation sites, nor is there frequent use of the area by local guides or outfitters. A fish improvement exists in the Meter Bight area. There is some subsistence use, especially in the more accessible portions of the roadless area. Subsistence use is mostly for hunting deer and berry picking. There is also some recreational hunting for bucks with large antlers, at the higher elevations in the northwest portion of the roadless area. Some people are using ATVs to access alpine areas within the roadless area for hunting. Approximately 906 acres are approved for harvest as part of the Skipping Cow Timber Sale. The Coast Guard has a permitted mountain top radio repeater communication site located in the northwestern portion of the area.

**(6) Appearance (Apparent Naturalness):** The area appears mostly unmodified. The Coast Guard communication site, located on the highest point on Zarembo Island, includes an equipment shelter, communication tower, solar array, wind turbine, helicopter pad and a bank of propane cylinders. Adjacent management activities have affected the apparent naturalness of this roadless area. The Skipping Cow Timber Sale, which has an approved EIS, would result in roads and timber harvest within the roadless area. This would further affect the size, shape, and overall appearance.

**(7) Surroundings (External Influences):** The roadless area is on Zarembo Island. The island has a history of timber management activities and includes a road network. Timber harvest areas and reforested plantations generally surround the roadless area on the north and west. A saltwater shoreline occurs along the eastern, southern, and southwestern borders. When harvesting activities occur adjacent to or near the roadless area, their sights and sounds may create an impact. Boats plying the nearby saltwater may be visible from within parts of the roadless area, but usually are not intrusive. Low-flying aircraft may temporarily distract visitors in the area.

**(8) Attractions and Features of Special Interest:** There is some subsistence hunting and recreational hunting, especially for bucks with large antlers, at the higher elevations in the northwest portion of the roadless area. The area contains 5 inventoried recreation places, which cover 4,360 acres (10 percent) of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The roadless area boundary has been changed to include older, beach-logged timber harvest units along the southern boundary. There are no roads along the beach and trees have reestablished themselves in these older harvest units. The roadless area boundary has also been expanded to the west to include the area east of Road 6585, which is part of the Snow Pass Old-Growth Reserve. Significant portions of the roads in the Snow Pass Creek Old-Growth Reserve were decommissioned in 2002. Several small areas were excluded from the area 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 is mostly unmodified. The Coast Guard has a permitted mountain top radio repeater communication site located in the northwestern portion of the area. Timber management activities outside of the roadless area, but within higher reaches of the drainages, may have altered some of the natural processes. This impact, however, is considered low. The Skipping Cow Timber Sale, which has an approved EIS, would result in additional roads and timber harvest within the Roadless Area. This would affect approximately 2,000 acres of the roadless area directly and may alter some of the natural processes and appearance. This timber sale would reduce the suitability for this area to be classified as wilderness.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and primitive recreation within the area. Low-flying airplanes and recreational boaters may at times pass nearby and be observed by people in this roadless area. Present recreation use levels are low. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the community of Petersburg in about 3 hours and from Wrangell in approximately 2 hours. Generally, a person camped or traveling inland is unlikely to see others. Periodic timber harvest activities in the adjacent areas would have a significant impact on the opportunity for solitude when they are occurring.

Travel within the area is moderately challenging, requiring moderate woods skills and experience. 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) | 30,820 | 73% |
| Semi-Primitive Motorized (SPM) | 4,255 | 10% |
| Roaded Modified (RM) | 6,924 | 17% |

The area contains five inventoried recreation places, which cover 4,360acres (10 percent) of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| SPNM | 0 | 0 |
| SPM | 2 | 1,518 |
| RM | 4 | 2,841 |

* 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 opportunities in the area. There is also some recreational hunting for bucks with large antlers, at the higher elevations in the northwest portion 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 South Zarembo 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 20. This rating reflects the effects of adjacent developments on the attributes of the area.

**(4) Ecologic and Geologic Values:** There are no known special features in this roadless area.

**(a) Fish Resources:** None of the VCUs were listed as primary salmon or sport fish producers by the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998).

Streams in the roadless area provide spawning and rearing habitats for coho, chum, and pink salmon, steelhead, cutthroat trout, and Dolly Varden char. The area contains portions of the Nesbitt Creek, Vial Creek, and Middle Meter Bight watersheds. Meter Bight Creek has been identified as having some of the highest quality fish habitat in the Wrangell Ranger District.

**(b) Wildlife Resources:** The area supports a large population of Sitka black-tailed deer. Wolves, black bear, moose, beaver and river otters also occur here. Elk have recently colonized the island. The heaviest populations appear to be in the Vial Creek and Middle Meter Bight Creek drainages. Bald eagles, osprey, and other raptors nest in the area. Vancouver Canada geese and sandhill cranes are found in ponds in the area. Eleven bald eagle nest sites have been identified in this roadless area. An osprey nest was

found in the Meter Bight drainage. Surveys completed for the Skipping Cow Timber Sale EIS (USDA Forest Service, 2000) indicate that marbled murrelets may also nest in this area, and Queen Charlotte goshawks may use the island as winter habitat. Brown bear and mountain goats are not known to occur here.

**(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. An osprey nest was found in the Meter Bight drainage. 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 may use the island as winter habitat. In addition, eight sensitive plant species are known or suspected to occur in the Wrangell 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 opportunities to study wildlife, ecology, and the forces and processes that form the topography of the area.

**(6) Scenic Values:** The visual character type of this area is Kupreanof Lowland, characterized by islands of rolling terrain exhibiting gradual relief separated by an intricate network of waterways. Numerous small rocky islands, shorelines and rock reefs are evident. The area appears essentially unmodified from adjacent marine travel routes; however, adjacent management activities are visible. The Skipping Cow Timber Sale, which has an approved EIS, would result in additional roads and timber harvest within the roadless area. This may further affect scenic values.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include: Stikine Strait, which is a part of the Alaska Marine Highway and a tour ship route, and Snow Passage, a saltwater use area and travel route.

Most of the area, 86 percent, is inventoried as Variety Class B (possessing landscape diversity that is common for the character type). Approximately 13 percent is inventoried in Variety Class C (possessing a low degree of landscape diversity).

Much of the roadless area, 55 percent, is in Existing Visual Condition (EVC) I, where the landscape appears to be untouched by human activity. Twenty-two percent of the area is in EVC IV, in which changes to the landscape are easily noticed by the average person and may attract some attention, but still resembles natural patterns. EVC V accounts for approximately 23 percent of the area, where changes to the landscape are obvious to the average person and appear to be major disturbances.

**(7) Social, Cultural, and Historical Values:** Zarembo Island was used by all of the Stikine Tlingit clans for hunting and gathering of subsistence items. Their use of southern Zarembo Island is indicated by the reported remains of a village site, as well as recorded burial sites, fish weirs, petroglyphs, and pictographs. Historic use is evidenced by the remains of several cabins. The area is used for subsistence hunting and gathering by the people of Wrangell and, to a lesser extent, Petersburg, especially in the more accessible portions of the roadless area. VCUs 457 and 458, which occupy the western half of the area, were identified in the second tier of the highest value community use areas. They were also listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is bounded on the north by land managed for timber and on the west by an old-growth reserve, which is currently roaded. Significant portions of the roads in the Snow Pass Creek old-growth reserve were decommissioned in 2001. It is bounded on the southwest, south, and east by saltwater. Portions of the north and west boundaries could be pulled back to follow ridgelines. The area between this roadless area and Roadless Area 235 is allocated to old-growth reserve. Managing this roadless area in a roadless condition would be consistent with the goals of this old-growth reserve and the one in the eastern third of the roadless area and would facilitate the movement of wildlife between the two reserves.

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

**(1) Recreation, Including Tourism Potential:** There is potential for outfitter and guide permits and for developed trails, cabins, or shelters. No outfitter/guide permits were issued for this roadless area in 2000.

**(2) Subsistence Uses:** There is considerable subsistence deer hunting on Zarembo Island, some of which occurs within the outer reaches of the roadless area. Limited motorized use of the road system occurs by Wrangell residents; however, the road system is outside the current roadless area boundary. Some people are using ATVs to access alpine areas within the roadless area for hunting. Subsistence users commenting on the proposed Skipping Cow Timber Sale were divided on whether maintaining the area in a roadless condition or building roads and harvesting timber would improve or harm subsistence use.

**(3) Fish Resources:** A pool-and-weir fish ladder for pink salmon was constructed in 1990 on Meter Bight Creek. No other fish habitat improvement projects are planned for the area at this time.

**(4) Wildlife Resources:** Wildlife habitat improvement projects planned for the area include thinning of past harvest stands in the beach fringe.

**(5) Timber Resources:** There are approximately 17,277 acres mapped as productive old growth. There are also 636 acres of second-growth forest. Of this area, 13,348 acres are defined as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 3,634 acres (9 percent) of this roadless area are estimated to be suitable for timber production. Approximately 457 of the suitable acres are mapped as high-volume old growth; of these acres, 40 are mapped as high-volume, coarse-canopy old growth.

Approximately 906 acres are approved for harvest as part of the Skipping Cow Timber Sale. The potential for managing timber in this roadless area is dependent on higher market values. A road system is already present nearby and could be extended into this area. Two sites for transferring logs to saltwater are already present on Zarembo Island.

**(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 roadless area contains 13,299 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). The roadless area also contains an estimated 41,967 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.

Information from the U.S. Bureau of Mines indicates the Duncan Canal/Zarembo Island mineral tract has a moderate to high mineral development potential for barite, zinc, lead, and silver.

**(8) Transportation and Utilities**: No transportation or utility corridors are proposed in the roadless area except for timber management related roads in the LUDs which allow this use.

**(9) Water Availability and Use:** No developed recreation 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:** The area contains no Research Natural Areas and has not been identified for any other scientific value. There are opportunities to study forests, wildlife and geologic processes.

**(11) Land Use Authorizations:** There is one special use permit in the area for a Coast Guard mountain top electronics communication site.

**(12) Land Status:** All land in this roadless area is part of the National Forest System.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Some Wrangell residents generally favor road building and timber harvest, but there is also some interest in maintaining the area as unroaded. Most use of the area is for subsistence and recreation and occurs along the beach fringe and existing roads to the north.

**(b) Congressional Interest:** In 1989, U.S. House of Representatives Bill HR 987 proposed designating 23 areas as wilderness. The bill did not include this area. In 2001, HR 2908 did not propose this area for wilderness but it did propose that most of the area be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

**(c) Public Input During Forest Plan Revision and Appeals:** The Wrangell Resource Council recommended that the area be managed for primitive recreation (in a Primitive Recreation LUD). Comments received from the timber industry favored managing all of Zarembo Island in Timber Production to allow for a sustainable, economic timber sale program.

**(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review:** The area was not specifically mentioned in 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:** A number of comments on the Skipping Cow DEIS were received that were relevant to the roadless area. Many favored maintaining the area in a roadless condition and a few supported additional road building and logging.

**(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 Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 237 for permanent protection as LUD II. SEACC recommended the remaining unlogged portions of Woronkofski, Zarembo, and North Etolin Islands be safeguarded through LUD II protection.

**(2) Nearby Roadless and Wilderness Areas and Uses:** Two other roadless areas exist on Zarembo Island, South Zarembo and East Zarembo. None of these roadless areas are adjacent to each other. The East Zarembo Roadless area is separated from this roadless area, a distance of approximately 5 miles, by areas managed for timber. The West Zarembo Roadless Area is separated from this roadless area by an old-growth reserve, which has had road building and timber harvest. Significant portions of the roads in the Snow Pass Creek area were decommissioned in 2001. Subsistence and light recreational use occurs in all of them.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 70 | 80 |
| Wrangell (Pop. 2,308) | 15 | 20 |
| Petersburg (Pop. 3,224) | 30 | 40 |
| Juneau (Pop. 30,711) | 145 | 160 |

Petersburg and Wrangell are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The South Zarembo Roadless Area is located on the south side of Zarembo Island. Stikine Strait borders the area on the east and south and Clarence Strait lies to the southwest. The area has moderately-rolling terrain. Several streams drain the area, and has some small ponds and lakes. Elevation ranges from sea level to 2,500 feet.

The area is mostly natural appearing and unmodified; however, it is influenced by developed areas that make up parts of its border. The natural integrity and apparent naturalness are rated high for the area. The opportunity for solitude and primitive recreation is high.

None of the roadless area is rated as distinctive for the character type from a visual perspective.

The area has been colonized by elk, which were introduced on nearby islands; however, this is not a valuable attribute for wilderness. The area has no other features of ecologic, geologic, scientific, or cultural significance.

The roadless area includes about 3,542 acres of high-volume, old-growth forest. Of these acres, 590 are mapped as high-volume, coarse-canopy old growth.

The South Zarembo Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes about 8 percent of the province. It is one of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The South Zarembo Roadless Area lies within two ecological sections; it represents 2 percent of the Kupreanof Lowlands Ecological Section and 1 percent of the Inside Passage Fjordlands Ecological Section. Minor portions of the Kupreanof Lowlands Ecological Section is in existing wilderness or LUD II (1 percent in each) and an additional 33 percent is protected by other existing non-development LUDs. However, 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.

Most (58 percent) of the roadless area is in the Sumner Strait Volcanics Ecological Subsection. This portion of the roadless area represents 7 percent of the entire ecological subsection, minor portions of which are protected by existing wilderness and LUD II (0.1 percent and 1 percent, respectively) and an additional 32 percent is protected by other existing non-development LUDs. Thirty-nine percent of the roadless area is in the Stikine Strait Complex Ecological Subsection; this portion of the roadless area represents 25 percent of the entire ecological subsection, 42 percent of which is protected by existing non-development LUDs. The remaining 3 percent of the roadless area is in the Duncan Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents 1 percent of the entire ecological subsection, of which, 5 percent is protected in existing wilderness and 35 percent is in other non-development LUDs.

The South Zarembo 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 considerable support for managing the area in an unroaded condition, but very little support for designating the area as wilderness. Designation would create a wilderness with few significant or unique attributes. However, designation of the area would add Congressional protection to approximately 25 percent of the Stikine Strait Complex Ecological Subsection that is not currently represented in wilderness or LUD II. Designation would also

add Congressional protection to approximately 7 percent of the Sumner Strait Volcanics Ecological Subsection that has approximately 1 percent protected in wilderness or LUD II. The area includes the timber sales authorized by the Skipping Cow Timber Sale Final EIS. 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 South Zarembo 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 in the remaining 55 percent. The land in the development LUDs provides an estimated 3,634 acres that are suitable for timber production (4 percent of the suitable acres on the Wrangell Ranger District). Approximately 40 of the suitable acres are classified as high-volume, coarse-canopy old growth. The Skipping Cow timber sales would continue. The roadless area contains 13,299 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. The roadless area also contains an estimated 41,967 acres of undiscovered locatable mineral resources; all of the acres are considered to have low potential for development. The timber sales, 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 allowed by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. No timber harvest would be allowed. Designation of the area as LUD II would add Congressional protection to approximately 25 percent of the Stikine Strait Complex Ecological Subsection that is not currently represented in wilderness or LUD II. It would also add Congressional protection to approximately 7 percent of the Sumner Strait Volcanics Ecological Subsection that has approximately 1 percent protected in wilderness or LUD II. The values associated with the natural settings of the roadless area would be provided long-term protection if designated as LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area as wilderness would add Congressional protection to approximately 25 percent of the Stikine Strait Complex Ecological Subsection that is not currently represented in wilderness or LUD II. It would also add Congressional protection to approximately 7 percent of the Sumner Strait Volcanics Ecological Subsection that has approximately 1 percent protected in wilderness or LUD II. 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 237 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 41,999 |
| 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 | 18,970 | 18,970 | 18,970 | 18,970 | 18,970 | | 18,970 | |
| Semi-remote Recreation | 10 | 10 | 10 | 10 | 10 | | 10 | |
| Recommended LUD II | | | | | | 41,999 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 1,323 | 1,323 | 1,323 | 1,323 | 1,323 | | 1,323 | |
| Modified Landscape | | | | | | | | |
| Timber Production | 21,696 | 21,696 | 21,696 | 21,696 | 21,696 | | 21,696 | |
| **TOTAL** | **41,999** | **41,999** | **41,999** | **41,999** | **41,999** | **41,999** | **41,999** | **41,999** |
| Suitable Timber Lands | 3,634 | 3,634 | 3,634 | 3,634 | 3,634 | 0 | 3,634 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Kashevarof (238)

**ACRES (NFS):** 5,743

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Inside Passage Fjordlands and Kuiu-Prince of Wales Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 23

### I. Overview and Description

**(1) Location and Access:** This roadless area consists of the Kashevarof Islands (a series of small islands located in Clarence Strait) between Zarembo Island and Prince of Wales Island. Sumner Strait is to the north. The islands are located less than 10 miles north of Coffman Cove (on Prince of Wales Island) and almost 30 miles southwest of Wrangell is served by the Alaska Marine Highway and jet service. The two northern-most larger islands in the Kashevarof Island group, Bushy and Shrubby, are not included in this roadless area because they have been logged. Access is by way of boat or floatplane. There are no sites suitable for landing wheeled aircraft. Access into the interior is by foot or helicopter.

**(2) History:** The Tihitan clan of the Stikine Tlingit claimed this area, which was used chiefly for hunting seals and gathering seaweed. Their use is evidenced by the remains of temporary camps, fish weirs, and petroglyphs. Historic use is indicated by the remains of numerous fox farms, trapping cabins, and temporary camps. Goldschmidt and Haas (1946) identified a commercial fish trap on the east side of East Island.

**(3) Geography and Topography:** The islands in this roadless area have little relief and are flat to slightly rolling with a high point of 482 feet above mean sea level (msl) on one of the Blashke Islands. The area primarily consists of two island groups, Middle Islands and Blashke Islands, that are aligned north-south with Clarence Strait. West and East Islands and several other smaller islands are located on either side of the Middle Islands group. There are 95 miles of saltwater shoreline. The majority of the area is covered by forest. There are no ice and snow, alpine or rock features mapped in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. This roadless area is in the Etolin Island and Vicinity Biogeographic Province. The Etolin Island and Vicinity province is generally subject to continental influence from the mainland and the Stikine River. All forest plant associations except those occurring only on outer coast areas are present. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The Kashevarof Islands Roadless Area is contained mostly within the Inside Passage Fjordlands Ecological Section (M247E) and also contains a small portion within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F). These areas are represented by two ecological subsections (see table below). The Clarence Strait Volcanics Ecological Subsection is the dominant subsection and includes 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. A small portion of the Kashevarof Islands Roadless Area, approximately 3 percent, lies within the North Prince of Wales-Kuiu Carbonates Ecological Subsection, composed of limestone and marble karstlands (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Clarence Strait Volcanics | 97% |
| Kuiu-Prince of Wales Fjordlands | North Prince of Wales- Kuiu Carbonates | 3% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

**(c) Vegetation:** Vegetation of this roadless area primarily consists of typical spruce/ hemlock forests. Low-lying, poorly-drained portions of the area are muskeg.

There are approximately 5,486 acres mapped as forest land, of which 4,197 acres (76 percent) are mapped as productive old-growth forest. Of the productive old growth, approximately 858 acres (20 percent) are mapped as high-volume, old-growth forest. The productive old growth includes about 24 acres of high-volume, coarse-canopy old growth. The area also includes approximately 3 acres of second growth on the northernmost of the Middle Islands where logging has occurred.

**(d) Fish Resources:** Fish resources were rated by the Alaska Department of Fish and Game (ADF&G) in its Forest Habitat Integrity Program (1983), which described the value of VCUs for sport fish, commercial fish and estuaries. VCU 460, which encompasses this area, was not rated high for any of these values. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list this VCU as a primary salmon or sportfish producer. There are two Class II streams located on one of the Blashke Islands.

**(e) Wildlife Resources:** A small population of Sitka black-tailed deer and black bear range over the roadless area. MacDonald and Cook (1999) list wolves, deer, mink and river otter as inhabitants of the Kashevarof islands.

**(5) Management Direction and Current Uses:** The 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 Semi-remote Recreation.

| LUD | Acres |
|---|---|
| Timber Production | 16 |
| Semi-remote Recreation | 5,728 |

Less than 1 percent of the roadless area was allocated to one development LUD, Timber Production. This LUD is located on one island just southwest of Shrubby Island.

Almost 100 percent of the roadless area was allocated to one non-development LUD. The Semi-remote Recreation LUD was assigned to almost all of the islands in this roadless area.

Present recreation use levels are low. Subsistence use occurs in the area.

**(6) Appearance (Apparent Naturalness):** Overall the area has moderately high scenic quality with a mostly natural appearing landscape. A small area has been logged on the northernmost of the Middle Islands. The area is bound on all sides by saltwater and a person approaching the area in a boat would generally see natural scenery. There is an abandoned fox farm cabin and an operating oyster farm with three cabins located in the Blashke Islands. The area is visible from boats traveling Clarence Strait, Kashevarof Passage, and Stikine Strait.

**(7) Surroundings (External Influences):** The area is located in Clarence Strait between Zarembo Island and Prince of Wales Island. Evidence of management activities on these islands, mainly timber harvesting and road building, is visible from the Kashevarof Islands Roadless Area. Harvested areas on Shrubby Island, which is located immediately north of the Middle Islands, are also visible. The sights and sounds of any future harvesting activities in these nearby areas may also affect the Kashevarof Islands Roadless Area. Clarence Strait is a major passage for cruise ships, barges, ferries, and pleasure craft. Boats that travel this area may be visible from parts of the roadless area. The Alaska Marine Highway passes approximately 5 miles east of the Middle Islands. Low-flying aircraft may temporarily distract visitors in the area at times.

The 1999 Southeast Alaska Transportation plan identified a new ferry terminal that would be constructed at Coffman Cove. Ferries would travel daily between Coffman Cove and Wrangell passing within 1 or 2 miles of the Blashke Islands.

**(8) Attractions and Features of Special Interest:** The numerous small islands and sheltered bays provide opportunities for discovery, day use activities, and anchorage. The area contains two inventoried recreation places, which cover 5,743 acres (100 percent) of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The boundaries of this area are the same as they were in 1989 with one exception. A very small beach logged area on one of the Middle Islands that was excluded from the 1989 roadless area is included within the boundaries of the 2003 area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The natural integrity of this roadless area is mostly unmodified. A very small area on one of the Middle Islands has been logged. The area appears to be natural and appropriate for wilderness classification. There is an abandoned fox farm cabin and an oyster farm with three cabins located in the Blashke Islands.

**(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 within the area. Low-flying airplanes and frequent marine traffic pass nearby and may be observed by people in this roadless area. Present recreation use levels are low. The operators of the oyster farm live on Blashke Island and their facilities are apparent to anyone exploring the islands. Aside from this, a person camping or traveling inland is generally unlikely to see others. Timber harvest or other periodic activities in the adjacent areas would have a significant impact on the opportunity for solitude when they are occurring.

Travel on the islands would require low to moderate backcountry skills because of their flatter topography. The presence of black bears presents a degree of challenge and a need for caution

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) | 5,661 | 99% |
| Roaded Modified (RM) | 82 | 1% |

The area contains 2 inventoried recreation places, which cover 5,743 acres (100 percent) of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| SPM | 1 | 5661 |
| RM | 1 | 82 |

There are no developed recreation opportunities in the area. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the

community of Petersburg in about 4 hours, from Wrangell in approximately 2 hours, and from Coffman Cove in less than 1 hour.

**(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 Kashevarof Islands 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 23. This rating reflects the high natural integrity and apparent naturalness of the area.

**(4) Ecologic and Geologic Values:** The majority of the area is forested.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not list this VCU as a primary salmon or sportfish producer. There are two Class II streams located on one of the Blashke Islands.

**(b) Wildlife Resources:** A small population of Sitka black-tailed deer and black bear range over the roadless area. MacDonald and Cook (1999) list wolves, deer, mink and river otter as inhabitants of the Kashevarof 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, eight sensitive plant species are known or suspected to occur in the Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are 534 acres of karst resources mapped in this area, or approximately 9 percent of the roadless area. There are no glaciers or unique geologic features.

**(5) Scientific and Educational Values:** There are no special features in this roadless area. The location and array of islands make them attractive for recreational pursuits. Coffman Cove is located less than 10 miles south of the area, which suggests that this area is accessible to school-age children.

**(6) Scenic Values:** Overall the area has moderately high scenic quality with a mostly natural appearing landscape. The visual character type of this area is Kupreanof Lowland, characterized by islands of rolling terrain exhibiting gradual relief separated by an intricate network of waterways. Numerous small, rocky islands, shorelines, and rock reefs are evident. The character type is largely covered with spruce/hemlock forest except at infrequent higher elevations where scattered muskeg and alpine deciduous species occur. There are also significant areas of muskeg/lodgepole pine association. A small area has been logged on the northernmost of the Middle Islands. The area is visible from boats traveling Clarence Strait, Kashevarof Passage, and Stikine Strait.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include: Clarence Strait and Stikine Strait (Alaska Marine Highway and Tour Ship Routes); Kashevarof Passage (Other Travel Route); and the Kashevarof Island Group (Saltwater Use Area and Boat Anchorage).

Approximately 56 percent of this area was inventoried in the Variety Class A (possessing landscape diversity that is unique for the character type). Approximately 26 percent was inventoried in Variety Class B (possessing landscape diversity that is common for the character type). One percent of the area is inventoried in Variety Class C (possessing a low degree of landscape diversity). Approximately 17 percent was not inventoried.

The majority of the roadless area, 83 percent, has an Existing Visual Condition (EVC) Type I, where the landscape appears to be untouched by human activity. Approximately 17 percent of the area was not inventoried.

**(7) Social, Cultural, and Historical Values:** The Tihitan clan of the Stikine Tlingit claimed this area, which was used chiefly for hunting seals and gathering seaweed. Their use is evidenced by the remains of temporary camps, fish weirs, and petroglyphs. Historic use is indicated by the remains of numerous fox farms, trapping cabins, and temporary camps. Goldschmidt and Haas (1946) identified a commercial fish trap on the east side of East Island. Wrangell, the closest of the larger Southeast Alaskan communities, is located approximately 35 water miles east of the area. There is an active mariculture site in the Blashke Islands where oysters are cultivated.

Present recreation use levels are low. Subsistence use occurs in the area. A number of surrounding communities harvest deer on these islands for subsistence. VCU 460, which encompasses this roadless area, was not listed among the VCUs with highest community use value or among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is bounded on all sides by saltwater. The island clusters lend support for all or part of this roadless area to be managed either as wilderness or in an unroaded condition. Manageability in a wilderness condition may be less feasible due to the amount of marine traffic in the area and activities in the nearby adjacent areas. Overall manageability is considered moderate.

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

**(1) Recreation, Including Tourism Potential:** There is potential for outfitter and guide permits and for developed trails, cabins, or shelters.

**(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:** No fish habitat enhancement projects are identified in the Tongass Land Management Plan, amended Winter 1985-86.

**(4) Wildlife Resources:** As identified in the Tongass Land Management Plan, amended Winter 1985-86, wildlife enhancement projects are not planned in the roadless area.

**(5) Timber Resources:** There are approximately 4,197 acres mapped as productive old growth and 3 acres mapped as second growth due to timber harvest in the roadless area. Of these acres, 3,941 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs in this area, none of the acres are 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:** The area has low minerals potential.

**(8) Transportation and Utilities:** There are no known transportation or utility plans for this area.

**(9) Water Availability and Use:** There are no existing or planned hydroelectric projects. The oyster farmers have a domestic water system for their cabins in the Blashke Island group.

**(10) Areas of Scientific Interest:** The mapped karst resources encompass approximately 534 acres or 9 percent of the roadless area. The area does not contain any Research Natural Areas and has not been identified for any scientific purpose.

**(11) Land Use Authorizations:** The oyster farm in the Blashke Island group is authorized under a special use permit. There is also a Coast Guard reservation in the area.

**(12) Land Status:** All land within this roadless area is a part of the National Forest System.

## 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 recreational, and marine oriented.

**(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 Kashevarof Islands Roadless Area. In 2001, HR 2908 did not propose the area for wilderness, but did propose that the majority of the area be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

**(c) Public Input During Forest Plan Revision and Appeals:** There were no public comments or appeals that directly pertained to 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 National Forest 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 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 these islands be designated LUD II

Some individuals called for permanent protection of this area.

**(2) Nearby Roadless and Wilderness Areas and Uses:** Other roadless areas are separated from the Kashevarof Islands Roadless Area by extensive bodies of water. The Mosman Roadless Area is located east across Clarence Strait from the area. The Sarkar Roadless Area is located west across Kashevarof Passage. The closest wilderness area is the South Etolin Wilderness located approximately 20 miles southeast of the area.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 70 | 75 |
| Wrangell (Pop. 2,308) | 30 | 25 |
| Petersburg (Pop. 3,224) | 45 | 45 |
| Juneau (Pop. 30,711) | 155 | 165 |

Hollis and Coffman Cove, on Prince of Wales Island, and Wrangell are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Reservation System:** The Kashevarof Roadless Area consists of the Kashevarof Islands (a series of small islands located in Clarence Strait) between Zarembo Island and Prince of Wales Island. Sumner Strait is to the north. The islands in the Kashevarof Islands Roadless Area have little relief and are flat to slightly rolling with a high point of 482 feet above mean sea level (msl) on one of the Blashke Islands. Two island groups, Middle Islands and Bashke Islands, are basically aligned north-south with Clarence Strait. West and East Islands and several other smaller islands are located either side of the Middle Islands group.

The islands are mostly natural appearing. The natural integrity and apparent naturalness are rated as outstanding. The opportunity for solitude is moderate and the opportunity for primitive recreation is high.

Approximately 56 percent of the roadless area was rated as distinctive for the character type from a scenery perspective.

The islands have important cultural and historic values. There is some karst in the area.

The roadless area includes about 858 acres of high-volume, old-growth forest. Of these acres, 24 are mapped as high-volume, coarse-canopy old growth.

The Kashevarof Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes about 1 percent of the province. It is one of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The Kashevarof Islands Roadless Area lies within two ecological sections; it represents 0.3 percent of the Inside Passage Fjordlands Ecological Section and 0.1 percent of the Kuiu-Prince of Wales Fjordlands 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. 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 vast majority (97 percent) of the roadless area is in the Clarence Strait Volcanics Ecological Subsection; this portion of the roadless area represents 2 percent of the entire ecological subsection, 15 percent of which is in existing wilderness and 34 percent is in other existing non-development LUDs. The remaining 3 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 protected in existing LUD II and 25 percent in other existing non-development LUDs.

The Kashevarof 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 area in an unroaded condition, but very little support for designating the area as wilderness. Designation would create a wilderness made up of a small group of islands with

relatively high cultural and historic values. 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 Kashevarof Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Nearly all of the roadless area would be managed under non-development LUDs. There are no acres suitable for timber production in this roadless area. The recreation and special use programs would continue. The values associated with the natural settings of the roadless area, including the high 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 and special use programs would continue similar to current conditions. The values associated with the natural settings of the roadless area, including the high 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. The ongoing recreation and special uses programs may 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 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 238 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 5,743 |
| 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 | 5,728 | 5,728 | 5,728 | 5,728 | 5,728 | | 5,728 | |
| Recommended LUD II | | | | | | 5,743 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | 16 | 16 | 16 | 16 | 16 | | 16 | |
| **TOTAL** | **5,743** | **5,743** | **5,743** | **5,743** | **5,743** | **5,743** | **5,743** | **5,743** |
| Suitable Timber Lands | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Keku (239)

**ACRES (NFS):** 11,170

**BIOGEOGRAPHIC PROVINCE:** Kuiu Island

**ECOLOGICAL SECTION:** Kupreanof Lowlands and Kuiu-Prince of Wales Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 19

### I. Overview and Description

**(1) Location and Access:** The Keku Roadless Area is located on the northern end of Kuiu Island and the nearby Keku Islands. It lies east of Saginaw Bay, west of Keku Strait, and south of Frederick Sound. Roaded lands lie to the south. There is also a small, roaded area along Saginaw Bay, just southeast of Halleck Harbor. The roadless area is accessed primarily by saltwater via boat or floatplane. It is approximately 7 air miles across Keku Strait from Kake and 40 air miles from Petersburg. Petersburg and Kake are served by the Alaska Marine Highway and Petersburg has daily jet service.

Several good anchorages are located in Saginaw Bay, Halleck Harbor, and Keku Strait. There are no sites suitable for landing wheeled aircraft. Access to the interior is by foot or helicopter. There is no ferry service to Kuiu Island. The nearest ferry service is at Kake.

**(2) History:** Keku Strait and the surrounding area is in the traditional territory of the Kake Tlingit. There is a rich assortment of cultural resources, including the remains of villages, temporary camps, cave shelters, fish weirs, burial sites, pictographs, petroglyphs, and garden sites. A historic cannery was located in Saginaw Bay, and there are several fur farms and temporary camps on the Keku Islets.

This area was a contingency area of the Alaska Pulp Corporation Long-term Timber Sale Contract. A logging camp was developed at Saginaw Bay and nearby Rowan Bay and used intermittently during timber harvest activities. Road development has occurred to the south, along the head of Saginaw Bay. Forest Road 6415 connects Rowan Bay to Security Bay and Saginaw Bay, and is used as a major route for hauling logs to the transport facility in Rowan Bay. There is also a small, roaded area along Saginaw Bay, just southeast of Halleck Harbor. Timber harvest has occurred in both of these roaded areas. Beach logging took place along the northeast shore and on two of the Keku Islands.

**(3) Geography and Topography:** The landforms in this area are generally low lying in relief. The Keku Islets are distinctive, and scattered along the shoreline to the northwest for a distance of approximately 4 miles. The landscape is typical of glaciated volcanic terrain, characterized by gently-sloping to moderately steep hills that are abruptly broken to reveal prominent cliffs. Bedrock lithology is dominated by extrusive igneous rocks, with some carbonate formations. The elevation ranges from sea level to less than 1,000 feet. The cliffs generally parallel each other, and are oriented in a northwest-southeast direction. Southeast-facing slopes are long and relatively gentle, while northwest facing slopes are typically steep and benched with cliff faces. The area is almost entirely covered with spruce-hemlock vegetation. Muskeg openings tend to be small and uniform in distribution. Gill Lake, located along the southern boundary of the area, is relatively large, and with several other smaller lakes, total approximately 85 acres of freshwater lakes for this area. The area contains 72 miles of saltwater shoreline. Offshore islands total 1,690 acres, six of which are over 50 acres. There are about 13 acres of rock within this area and no mapped alpine or ice features.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Kuiu Island Biogeographic Province. This province is generally characterized by rolling, subdued topography and extensive muskeg areas, but may have localized, rugged terrain. Bedrock lithology is dominated by extrusive igneous rocks, but a portion of the area (generally from Saginaw Bay south to Kadake Bay) consists of carbonate rock with some karst features adjacent to the roaded area in the southwest. The climate in this biogeographic province is cooler, and winter snow pack is greater, than on islands to the south but milder than the mainland. The west portion is subject to severe windstorms. Stream density is relatively low (2.6 mi or 1,000 acres). In areas of volcaniclastic bedrock, actively eroding gullies (V-notches) are prominent and contribute a large amount of bed load sediments.

Ecological Section/Subsection. The Keku Roadless Area is contained mostly within the Kupreanof Lowlands Ecological Section (M247G) and also contains portions within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F). These areas are represented by two ecological subsections (see table below). The Kake Volcanics Ecological Subsection covers approximately two-thirds of the Keku Roadless Area and contains gently rolling hills of glacially reduced sedimentary and volcanic rock, usually below 1,000 feet elevation. Productive hemlock and spruce forests are found on the slopes. The remainder of the Keku Roadless Area, about one-third, lies within the North Prince of Wales-Kuiu Carbonates Ecological Subsection, composed of limestone and marble karstlands. 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 |
|---|---|---|
| Kupreanof Lowlands | Kake Volcanics | 68% |
| Kuiu-Prince of Wales Fjordlands | North Prince of Wales- Kuiu Carbonates | 32% |

**(b) Soils:** Soils are generally shallow to moderately deep and well-drained on forested hill slopes. Extensive areas of poorly-drained mineral soils and organic soils occur between hills and on the more gently-sloping southeast-facing hill slopes. Well-drained to somewhat poorly-drained soils developed on the foot slope below the limestone cliffs within Saginaw Bay. Areas of muskeg soils occupy nearly level positions along the ridgetops and in the valleys.

**(c) Vegetation:** Muskeg/forested wetland timber complexes are interspersed with mixed conifer plant communities on better-drained sites. Approximately 115 acres of muskeg are mapped for the area, however due to their small size and association with forested sites, accurate acreage estimates are difficult. Timbered hill slopes are dominated by western hemlock and western hemlock/Alaska yellow-cedar plant communities. Subalpine ecosystems occupy about 5 percent of the area. About 50 percent of the area is classified as wetland.

There are approximately 10,605 acres mapped as forest land, of which 6,246 acres or 59 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 2,761 acres or 44 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 480 acres of high-volume, coarse-canopy old growth. There are approximately 272 acres of second-growth forest where beach timber harvest has occurred.

**(d) Fish Resources:** Three Alaska Department of Fish and Game (ADF&G) numbered salmon producing streams are present. These are not large producers and although no escapement data are available, coho salmon and Dolly Varden char are present.

**(e) Wildlife Resources:** Sitka black-tailed deer, moose, beaver, river otter, marten, wolves, and black bear inhabit this roadless area. Black bears are especially abundant on the north end of Kuiu Island. Other terrestrial mammals include bats, mink, muskrat, ermine, red squirrel, mice, shrews, and voles. There are

occasional sightings of fisher and wolverine, but these are considered incidental species at the edge of their range.

Large flocks of ducks and geese pass this area during their spring and fall migrations through Keku Strait. Other bird species include bald eagles, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, marbled murrelets, osprey, spruce grouse, ptarmigan, sandhill cranes, trumpeter swans, and great blue herons. Red-throated, Pacific, and common loon all occur around Kuiu Island. Several plover, yellowlegs, and sandpiper species occur mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Sea mammals known to inhabit the waters surrounding Kuiu Island are the Pacific white-sided dolphin, killer whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal. Sea otters occur in the western areas of Sumner Strait off southern Kupreanof Island and on both eastern and western shores of Kuiu Island. They are expanding their range northward into Keku Strait.

Amphibians known to occur on Kuiu Island include rough-skinned newt, western toad, and wood frog. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts. Wood frogs are found in most of the ecosystems found in Southeast Alaska except for marine, estuarine, and riverine.

**(5) Management Direction and Current Uses:** The 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, Scenic Viewshed, Old-growth Habitat, Special Interest Area, and Semi-remote Recreation.

| LUD | Acres |
|---|---|
| Timber Production | 6,543 |
| Scenic Viewshed | 1,564 |
| Old-growth Habitat | 1,899 |
| Special Interest Area | 1,120 |
| Semi-remote Recreation | 43 |

The majority of the roadless area, approximately 73 percent, was allocated to development LUDs (Timber Production, Scenic Viewshed). Most of the roadless area, 59 percent, was allocated to the Timber Production LUD. Approximately 14 percent of the roadless area was allocated to the Scenic Viewshed LUD. The peninsula tip of the roadless area and the Keku Islands were allocated to this LUD.

Approximately 27 percent of the roadless area was allocated to non-development LUDs (Old-growth Habitat, Special Interest Area, Semi-remote Recreation). The Old-growth Habitat LUD was assigned to approximately 17 percent of the roadless area. Around Halleck Harbor, approximately 10 percent of the roadless area was allocated to the Special Interest Area LUD. This area, the Keku Islets Special Interest Area, is noted for its geologic, scenic, and cultural values. Lands managed under this designation have unique features and are protected for public use, study, and enjoyment of these natural areas (Forest Plan FEIS, Appendix F, Volume 2, F-4). Less than 1 percent of the roadless area was allocated to the Semi-remote Recreation LUD, which is located on the smaller islands off the coast.

Logging operations on Kuiu Island currently center on Rowan Bay. The road systems of Rowan and Saginaw were connected in 1976, and traverse the area. No timber harvest activities have been planned for the area at this time but parts of this area may be included in sales in the 10-year sale schedule.

The Bureau of Land Management manages a 5-acre parcel of land near Saginaw Bay. Several aboriginal sites have been conveyed to Sealaska Corporation and are managed to protect the cultural resources on the sites. Another 1,630 acres have been conveyed to Sealaska Corporation and 400 acres have been conveyed to Kake Tribal Corporation.

Recreation uses include bear, deer, and moose hunting; sea kayaking; beachcombing; camping; marine wildlife viewing; and gathering forest products. Non-resident sport hunters harvested 120 black bears from Kuiu Island in 2000. The area is popular for black bear subsistence hunting. Lack of cabins or commercial overnight facilities limits use by fly-in recreationists but good anchorages provide good boat camping. Five outfitter/guides used the roadless area in 2000 for a total of 636 service days.

**(6) Appearance (Apparent Naturalness):** Most of the area appears unmodified. Exceptions exist near the old cannery and the former logging camp sites, along shorelines where beach logging occurred, and in those portions of the roadless area that are adjacent to logged areas.

**(7) Surroundings (External Influences):** Keku Strait and Saginaw Bay border this area on three sides. Management activities have been continuing along the head of Saginaw Bay, where road construction and timber harvesting have been extensive. Forest Road 6415, which connects Rowan Bay to Security and Saginaw Bays, will likely continue to serve as a major access route for hauling logs. Modifications on lands adjacent to this route will continue to occur under current management direction as the area is allocated for timber management. Logging on adjacent islands has affected the setting of adjacent roadless islands, as well as the area as a whole. The Bureau of Land Management manages a 5-acre parcel of land near Saginaw Bay. Several aboriginal sites have been conveyed to Sealaska Corporation and are managed to protect the cultural resources on the sites. Another 1,630 acres have been conveyed to Sealaska Corporation and 400 acres have been conveyed to Kake Tribal Corporation.

**(8) Attractions and Features of Special Interest:** Several historical and aboriginal sites attract visitors to the area. Keku Islets Special Interest Area has numerous cultural sites and limestone formations, as well as plant and animal fossils. Beachcombing is also popular in this area. The area contains five inventoried recreation places, which cover 858 acres, or 8 percent of the roadless area. There are no developed trails. The presence of good anchorage sites in Saginaw Bay and Halleck Harbor allow visitors to "boat camp" overnight. Sport fishing for king salmon is considered good. The surrounding waters are good for whale watching.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The northern tip of the peninsula, the Fossil Bluffs area, was added to the roadless area since the 1989 analysis. Other small additions include portions of the Keku Islands that had not been included in the 1989 roadless area, and areas along the shore with harvest units but no roads. Areas roaded and harvested in the southwest and areas that are no longer National Forest System lands (in the central part) have been dropped from the roadless area. Changes in landownership have also reduced the size of the area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** Most of the area is unmodified (89 percent). However, evidence of past occupancy (the cannery site), beach logging, and other logging and roading has somewhat fragmented this roadless area. The timber harvest activity, which is readily apparent in and around the roadless area, decreases the appropriateness of the Keku Roadless Area for wilderness classification. The removal of areas that have been roaded and harvested from the roadless area and the conveyance of lands to the Sealaska Corporation and the Kake Tribal Corporation have nearly divided the roadless area into three subsections connected by narrow, unroaded areas.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** Generally, there is a moderate opportunity for solitude in the Keku Roadless Area. In places, the area is less than 0.2 mile wide and averages less than 2 miles across. Management activities along the road to Saginaw Bay will adversely affect solitude when these activities occur. Use of floatplanes and motorboats

may disrupt visitors for brief periods. Present recreation use levels are low. People camped along the shore are generally unlikely to encounter other recreationists, but they might be seen by or may be able to see an occasional fishing boat offshore or recreational boat.

Travel within the roadless area is moderately challenging. Much of the area contains gently sloping topography but there are also steep limestone cliffs that require climbing skills to cross. 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) | 4,762 | 43% |
| Semi-Primitive Motorized (SPM) | 4,696 | 42% |
| Roaded Modified (RM) | 1,712 | 15% |

The area contains five inventoried recreation places, which cover 858 acres, or 8 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| SPNM | 0 | 0 |
| SPM | 2 | 415 |
| RM | 4 | 443 |

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

No developed recreation opportunities are available. Five outfitter/guides used the roadless area in 2000, for a total of 636 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).

The inventoried roadless areas of the Tongass National Forest were rated according to this system in 1989 for the original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Keku 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 reflects the effects of adjacent developments and activities on the wilderness attributes of this area. The relatively small size of the area contributes to the effects.

**(4) Ecologic and Geologic Values:** The roadless area contains carbonate rock formations, including some karst and caves. The area around Halleck Harbor is designated as Keku Islets Special Interest Area, partly because of the karst, as well as cultural and scenic values. Much of the area is low-volume forest. Most of what little high-volume old growth that does occur is in the eastern side of the roadless area, on the carbonate rock formations.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) lists VCU 399 along Saginaw Bay as a primary salmon producer and no VCUs as primary sport fish producers. The other VCU, 398 along Keku Strait, is listed as a secondary producer of salmon.

**(b) Wildlife Resources:** Sitka black-tailed deer, moose, wolves, and black bear inhabit this roadless area. The north end of Kuiu Island has an especially high black bear population. Based on data compiled from 1985 to 1994, VCU 399 along Saginaw Bay, is listed among the top 25 percent of VCUs for black bear harvest (ADF&G, 1998). Deer winter habitat is generally found on southern aspects at low to moderate elevations in multi-canopied forests. Most of the area consists of low value deer winter habitat. Information from the Crane and Rowan Mountain Timber Sales EIS (USDA Forest Services, 1998) indicates that this area also supports habitat for otter, mink, marten, bald eagle, goshawk, trumpeter swan, and Canada goose. American peregrine falcons pass through the area during spring and fall migrations. Humpback whales inhabit marine waters near the 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 Petersburg Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** Keku Islets Special Interest Area has numerous and unusual limestone formations including small caves, arches, stocks, and cliffs, as well as plant and animal fossils. A portion of this roadless area is underlain by limestone or marble, and karst and cave resources are known to have developed there. 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. Approximately 2,300 acres, 21 percent of the roadless area, are mapped as low vulnerability karst resources.

**(5) Scientific and Educational Values:** Keku Islets Special Interest Area is a geologically interesting with its unusual limestone formations, as well as plant and animal fossils. It also has numerous cultural sites. The fossil beds, karst formations, and caves may be of scientific and educational value. The area contains cultural resources that would be beneficial in interpreting the history and prehistory of the area to visitors.

**(6) Scenic Values:** Most of the area is natural appearing with gently-sloping to moderately-steep hills that are abruptly broken by prominent limestone cliffs. Roading and timber harvesting activity is prominent at the head of Saginaw Bay and in the adjacent roaded areas along Saginaw Bay. The natural condition of the Keku Islands are visible from the Keku Strait and Frederick Sound. Keku Islets Special Interest Area is valued for its scenic beauty in addition to its geological formations.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Keku Strait, a tour ship and small boat route; Frederick Sound, a part of the Alaska Marine Highway that is used for saltwater attributes; and Saginaw Bay, which has notable saltwater uses.

About 8 percent of this roadless area was inventoried Variety Class A (possessing landscape diversity that is unique for the character type). Fourteen percent of the area was inventoried Variety Class B (possessing landscape diversity that is common for the character type). Approximately 69 percent was inventoried in Variety Class C (possessing a low degree of landscape diversity). Ten percent of the area was not inventoried.

The majority of this area, approximately 73 percent, was inventoried in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. Four percent of the area appears to be untouched by human activity and was inventoried in EVC Type II. Two percent of the area was inventoried in EVC Type III, where changes in the

landscape may be seen by the average person, but appear natural. Five percent of the area was inventoried in EVC Type IV, where changes in the landscape are easily noticed by the average person, but resemble natural patterns. Seven 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. Approximately 10 percent of the area was not inventoried.

**(7) Social, Cultural, and Historical Values:** The area lies within the traditional territory of the Kake Tlingit. Numerous cultural resource sites exist in the area, including the remains of villages, temporary camps, cave shelters, fish weirs, burial sites, pictographs, petroglyphs, and garden sites. An historic cannery was located in Saginaw Bay and several fur farms and temporary camps on the Keku Islets. These cultural resources would be beneficial in interpreting the history and prehistory of the area to visitors. Saginaw Bay was heavily used prior to 1870 and is still important for gathering subsistence items, especially for the people of Kake. The major resource gathering activities are hunting; fishing; shellfish gathering; and firewood, berry, and herring egg harvest. Subsistence deer and bear hunting also occur in the area. Both VCUs in the area, 398 and 399, are listed among the VCUs with the highest community use values. Neither is listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998). There are no developed recreation areas within the roadless area but there are five inventoried recreation places that are used for camping or picnicking along the shoreline. Road development associated with timber management has occurred to the south, along the head of Saginaw Bay. There is also a small, roaded area along Saginaw Bay, just southeast of Halleck Harbor.

There are small, non-National Forest System holdings along the shore (BLM and Sealaska Corporation) and two larger in-holdings that have been conveyed to the Sealaska Corporation and the Kake Tribal Corporation.

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** Saltwater surrounds this roadless area on three sides: Saginaw Bay to the west, Frederick Sound to the north, and Keku Strait to the east. The Keku Islands, which are part of the roadless area, lie within the Keku Strait. Road access has been developed to the head of Saginaw Bay, with the potential to extend into the Keku Strait area. The roadless area is a long, narrow peninsula, less than 0.2 mile wide in places and averaging about 2 miles across. Roads and harvest units adjoin the western edge of the area. Most of the area is allocated to timber management, as is the heavily managed area to the south. Only the northern tip of the peninsula, the Fossil Bluffs area, and the offshore islands are allocated to a non-development LUD. The roadless area would be difficult to manage as a wilderness due to size, shape, and adjacent development. Also, much of the northeastern portion of the roadless area has been conveyed to the Sealaska Corporation and the Kake Tribal Corporation, further reducing the width of the area. Management under private ownership may or may not be consistent with wilderness designation. Much public interest has been expressed about this roadless area, especially from people at Kake. This in part reflects the high cultural and historic values associated with the area, as well as, the karst related resources.

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

**(1) Recreation, Including Tourism Potential:** Recreation potential for Keku is moderate. Tourism is increasing in Southeast Alaska and the area's proximity to Kake may result in increased use of the area by tourists. There is potential for additional outfitter and guide permits, cabins, and opportunities associated with roaded access. Five outfitter/guides used the roadless area in 2000, for a total of 636 service days.

**(2) Subsistence Uses:** Wilderness designation would not adversely affect these uses.

**(3) Fish Resources:** The only potential fish habitat improvement project identified for this area is a barrier falls modification on Gil Creek. A portion of Gil Creek is located within the roadless area boundary.

**(4) Wildlife Resources:** No wildlife habitat improvement projects have been identified for this area.

**(5) Timber Resources:** There are approximately 6,246 acres mapped as productive old growth in the roadless area. There are also approximately 272 acres of second growth. Of these, 4,861 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), 1,096 acres or 10 percent of this roadless area are estimated to be suitable for timber

production. Approximately 507 of the suitable acres are mapped as high-volume old growth; of these acres, 84 are mapped as high-volume, coarse-canopy old growth.

A logging camp was developed at nearby Rowan Bay in support of logging operations. Extensive road development and logging has occurred south of the roadless area. Most of the area is allocated for timber management. Some medium- and high-volume forest lies within helicopter yarding distance from saltwater or existing roads and might be economically harvested without additional roadbuilding. There are no roads or harvests currently planned in the 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:** There are no inventoried sites with high mineral development potential in the area. The roadless area contains an estimated 10,265 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:** The roadless area does not contain any transportation or utility corridors. Any roads built would likely be short roads built for timber sales rather that arterial roads.

**(9) Water Availability and Use:** There are no recreation or other facilities in the area that create a water demand. There are no existing or planned hydroelectric or domestic water projects in the area.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas. The Keku Islets Special Interest Area contains geologically and culturally interesting values. The fossil beds, karst formations, and caves may be of scientific and educational value. The mapped karst resources encompass approximately 2,300 acres or 21 percent of the roadless area. The area contains cultural resources that could be used to interpret the history and prehistory of the area. Management of this area as wilderness may restrict research activities.

**(11) Land Use Authorizations:** Forest Service records show that five outfitters/guides used this area in 2000 for a total of 636 service days for remote setting nature tours.

**(12) Land Status:** All land within the roadless area is part of the National Forest System. Encumbered land is located in the central part of this roadless area and is adjacent to land owned by Native Village Corporations.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** This area has cultural and traditional use value to the residents of Kake. It is an important subsistence use area for the residents of Kake.

**(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 Bill did not include this area. In 2001, HR 2908 did not propose this area for wilderness but it 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:** The Kake Tribal Council wanted all of the bays and inlets on north Kuiu Island protected from timber harvest. The Narrows Conservation Coalition wanted all of north Kuiu Island managed for primitive recreation. The City of Kupreanof commented that the area should be preserved as a wilderness because of its subsistence value. Other comments supported managing the area as old growth and prohibiting logging because of the adverse impact on major subsistence streams, archaeological sites, commercial fishing, Alaska Natives, and on private property. Timber interests commented that no new areas should be designated as 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. Others wanted to see development continue on the Tongass.

**(e) Public Input Expressed for Project-level EISs and Other Input:** Public input was received on the Crane and Rowan Mountain Timber Sale EIS. The Southeast Alaska Conservation Council stated that no decision should be made until the roadless issue is decided at the national level. The City of Kake commented that subsistence use would be adversely affected by timber harvest, including the cultural and spiritual value of participating in traditional subsistence harvests in the old-growth forests used by the ancestors of the Tlingit residents of Kake for countless generations. Logging and road building in these sacred places permanently and irreparably degrades an important cultural experience. They stated that courts have recognized that ANILCA protects this value. This position was supported by the Southeast Alaska Conservation Council, the Earthjustice Legal Defense Fund, and other commenters. The Alaska Forest Association supported roads and timber harvest.

**(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 the remaining unlogged portions of northern Kuiu Island should be protected by LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 239 for permanent protection as LUD II.

A number of cave/karst experts and other individuals stated that this area contains approximately 2,400 acres of karst that extends from alpine to sea level and includes a wide range of development. The Keku Islets Special Interest Area also includes numerous interesting formations including arches, small caves, sea stacks, and cliffs, along with many fossils. The commenters noted that this area and adjacent developed karstlands should be protected as wilderness.

Some individuals recommended protection of Threemile Arm and Port Camden.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The area is separated from other roadless and wilderness areas by Frederick Sound and Port Camden and the Keku Strait on the north and east and by roaded and harvested lands to the west and south. However, it is adjacent to Camden Roadless Area (242), which covers much of northeast Kuiu Island, by a narrow strip of roadless land near Gil Harbor. The western portion of Camden Roadless Area (242) is narrow and is separated from the eastern portion of Camden Roadless Area by saltwater (Port Camden). These roadless areas receive light to moderate use.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 95 | 100 |
| Petersburg (Pop. 3,224) | 40 | 90 |
| Wrangell (Pop. 2,308) | 70 | 85 |
| Ketchikan (Pop. 14,070) | 135 | 150 |

Kake and Petersburg are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Keku Roadless Area is located on the northern end of Kuiu Island and the nearby Keku Islands. It lies east of Saginaw Bay, west of Keku Strait, and south of Frederick Sound. Developed lands lie to the south. There is also a small, developed area along Saginaw Bay, just southeast of Halleck Harbor. Landforms in this area are characterized by gently-sloping to moderately-steep hills that are abruptly broken by prominent limestone cliffs.

The roadless area is mostly unmodified; however, it is influenced by developments on adjacent lands. The natural integrity and apparent naturalness is rated high for the area. The opportunity for solitude is moderate and the opportunity for primitive recreation is moderate.

Approximately 8 percent of the landscape is considered distinctive for the character type from a scenery standpoint. Keku Islets Special Interest Area is geologically interesting with its unusual limestone formations, as well as plant and animal fossils. It also has numerous cultural sites. The fossil beds, karst formations, and caves may be of scientific and educational value. The area contains cultural and historical resources that would be beneficial in interpreting the history and prehistory of the area to visitors.

The roadless area includes about 2,761 acres of high-volume, old-growth forest. Of these acres, 480 are mapped as high-volume, coarse-canopy old growth.

The Keku Roadless Area is classified as being in the Kuiu Island Biogeographic Province and makes about 2 percent of the province. It is one of eight inventoried roadless areas found within the province that collectively make up about 53 percent of the province. The Tebenkof Bay and the Kuiu Wildernesses are located in this province and makes up about 26 percent of the province. The province also includes the Sumner, Conclusion, and associated islands LUD II area that make up about 1 percent of the province.

The Keku Roadless Area lies within two ecological sections; it represents approximately 1 percent of the Kupreanof Lowlands Ecological Section and 0.5 percent of the Kuiu-Prince of Wales Fjordlands 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. 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 (68 percent) of the roadless area is in Kake Volcanics Ecological Subsection; this portion of the roadless area represents 6 percent of the entire ecological subsection. Approximately 23 percent of this ecological subsection is protected by existing non-development LUDs. The remaining 32 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 protected in existing LUD II and 25 percent in other existing non-development LUDs.

The Keku 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 management of the area in an unroaded condition, but very little support for designating the area as wilderness. Designation would create a wilderness that has high cultural, historic, geologic, and scientific values. Designation of the area would add Congressional protection to about 6 percent of the Kake Volcanics Ecological Subsection that is not currently represented in wilderness or LUD II. The area is also influenced by ongoing developments in the immediate area. It also has adjacent private land parcels and one larger inholding of private land. 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 Keku Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 27 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 73 percent. The land in the development LUDs provides an estimated 1,096 acres that are suitable for timber production (1 percent of the suitable acres on the Petersburg Ranger District). Approximately 84 of the suitable acres are classified as high-volume, coarse-canopy old growth. Timber sales under contract and future sales would continue. The roadless area contains an estimated 10,265 acres of undiscovered locatable mineral resources; all the acres are considered to have moderate potential for development. The timber sales, 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 allowed by the

Forest Plan. The values associated with the very high cultural, historic, geologic, and most scenic values of the roadless area are protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. No timber harvest would be allowed. Designation of the area would add Congressional protection to about 6 percent of the Kake Volcanics Ecological Subsection that is not currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area, including the very high cultural, historic, geologic 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. No timber harvest would be allowed and the recreation, minerals, and special uses programs could be restricted. Mineral prospecting 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 6 percent of the Kake Volcanics Ecological Subsection that is not currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area, including the very high cultural, historic, geologic 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 239 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 11,170 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | | 1,120 | |
| Remote Recreation | | | | | | | | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | 1,899 | 1,899 | 1,899 | 1,899 | 1,899 | | 1,899 | |
| Semi-remote Recreation | 43 | 43 | 43 | 43 | 43 | | 43 | |
| Recommended LUD II | | | | | | 11,170 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 1,564 | 1,564 | 1,564 | 1,564 | 1,564 | | 1,564 | |
| Modified Landscape | | | | | | | | |
| Timber Production | 6,543 | 6,543 | 6,543 | 6,543 | 6,543 | | 6,543 | |
| **TOTAL** | **11,170** | **11,170** | **11,170** | **11,170** | **11,170** | **11,170** | **11,170** | **11,170** |
| Suitable Timber Lands | 1,096 | 1,096 | 1,096 | 1,096 | 1,096 | 0 | 1,096 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Security (240)

**ACRES (NFS):** 35,497

**BIOGEOGRAPHIC PROVINCE:** Kuiu Island

**ECOLOGICAL SECTION:** Kuiu-Prince of Wales Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 22

### I. Overview and Description

**(1) Location and Access:** The Security Roadless Area is located on the northwest side of Kuiu Island, approximately 15 air miles southwest of Kake and about 50 air miles west of Petersburg. Both cities are accessed via the Alaska Marine Highway and Petersburg is served by daily jet service. Chatham Strait lies to the west, Security Bay to the northeast, and Frederick Sound to the north. A roaded area lies to the east. It is accessed primarily by saltwater and by air. The only secure anchorage along the Chatham coast is in Washington Bay, the remaining west coast is rocky and open to severe marine weather. Security Bay and Rowan Bay have good anchorages. It is possible to land floatplanes within Washington Bay and also in Security and Rowan Bays. There are no sites suitable for landing wheeled aircraft. Inland access is by foot or helicopter. There is no ferry service to Kuiu Island, and the road system does not connect to any community.

**(2) History:** North Kuiu Island is in the traditional territory of the Kake Tlingit. Evidence of past use is indicated by the remains of villages, camps, forts, gardens, fish traps, pictographs, petroglyphs, and culturally modified trees. Security and Saginaw Bays were heavily used prior to 1870. These bays are still important for gathering subsistence items. Historic use of the area is evidenced by the remains of a herring reduction plant and cannery in Washington Bay, and fur farms and troller camps in Security Bay. No known cultural sites exist inland. A logging camp at nearby Rowan Bay supports logging operations, and it is occupied intermittently during timber harvest activities. Extensive road development and timber harvest has occurred east of this area. The Security Bay State Marine Park was designated in the mid-1980s and is adjacent to this roadless area.

**(3) Geography and Topography:** This coastal area is represented by steep, heavily-dissected slopes, rocky beaches, and numerous streams cascading directly into saltwater. Washington Bay is typical of this setting. Security Bay, also a major feature of this area, has more gently-sloping terrain characteristic of glaciated valleys. Elevations of this area range from sea level to about 3,300 feet. Bedrock lithology consists of plutonic rocks of the Kuiu-Etolin plutonic belt of Miocene age (20 to 22 million years ago) and older plutons of the Chilkat-Prince of Wales plutonic province of Cretaceous age (about 100 million years ago). Rock types are primarily massive, non-foliated intrusive igneous rocks, mostly granite, granodiorite, quartz diorite, and quartz monzodiorite.

The area is largely covered with spruce-hemlock forest over interspersed mountain ridges and peaks. Few muskeg areas exist. Three islands account for 271 acres, while freshwater lakes make up approximately 90 acres. Alpine ecosystems cover approximately 742 acres, rock covers 2,621 acres, and there are no mapped ice or snow features. The area has 63 miles of shoreline.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Kuiu Island Biogeographic Province. This province is generally characterized by rolling, subdued topography and extensive muskeg areas, but may have localized, rugged terrain. The west-facing side of the Security Roadless Area is typical of the exposed, moderate-energy shoreline facing west and south along major waterways of Southeast Alaska. The climate is cooler, and winter snow pack is greater, than on islands to the south but milder than the mainland. The west portion is subject to severe windstorms. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The Security Roadless Area is contained entirely within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F), represented by two ecological subsections (see table below). The Kuiu-Prince of Wales Granitics Ecological Subsection is the dominant subsection within the Security Roadless Area. Rugged mountaintops of igneous rock 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 Rowan Sediments Ecological Subsection forms the remaining 19 percent of the Security Roadless Area. Glacially smoothed hills and broad valleys carved from sedimentary rock on northcentral Kuiu Island support highly productive hemlock or hemlock-spruce forests. Valley bottoms contain a variety of wetlands that have developed in poorly drained organic soils (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kuiu-Prince of Wales Fjordlands | Kuiu-Prince of Wales Granitics | 81% |
| | Rowan Sediments | 19% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately well-drained soils are on moderate to steep mountain slopes with permeable parent materials (residuum from granitic rocks). These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils develop in colluvium or glacial till and have deep accumulations of organic matter, and range from scrubby forested wetlands to open muskeg. Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils, or are extremely shallow and rocky. Large alluvial fans on mountain toe slopes are characteristic of this area.

Drainage density is 4.1 miles/1,000 acres, the highest on Kuiu Island. This area also has the highest percentage of high gradient contained streams. Most low-velocity streams often have sandy substrates derived from weathered granitic soil.

**(c) Vegetation:** The western hemlock plant community dominates the lower elevations while the mountain hemlock plant community predominates immediately below the subalpine zone at around 2,000 feet in elevation. Muskegs occur infrequently on lower slopes and in valley bottoms. Sitka spruce and western hemlock plant communities occur on large alluvial fans. Nearly all of the alpine ecosystems (742 acres mapped) on Kuiu Island occur in this landscape at elevations of about 2,000 to 3,350 feet. Although no permanent snowfields or glaciers occur in this area, the snow pack on north slopes persists for most of the year. Brush communities dominated by Sitka alder and salmonberry occur in narrow snow avalanche tracks that run from alpine areas to near sea level.

There are approximately 30,142 acres mapped as forest land, of which 23,619 acres or 78 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 14,995 acres or 63 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 4,361 acres of high-volume, coarse-canopy old growth. There are approximately 573 acres of second-growth

forest where timber harvest has occurred in the past. The majority of the harvest (552 acres) was beach harvest.

**(d) Fish Resources:** Nine Alaska Department of Fish and Game (ADF&G) numbered salmon producing streams are present in the roadless area. These streams produce very small numbers of pink, chum, and coho salmon, and Dolly Varden char. The exception is Security Salt Chuck stream which produces a late chum and coho return due to a unique upwelling water condition.

**(e) Wildlife Resources:** Sitka black-tailed deer, moose, beaver, river otter, marten, wolves, and black bear inhabit this roadless area. Black bears are especially abundant on the north end of Kuiu Island. Other terrestrial mammals include bats, mink, muskrat, ermine, red squirrel, mice, shrews, and voles. There are occasional sightings of fisher and wolverine, but these are considered incidental species at the edge of their range.

Bird species include bald eagles, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, marbled murrelets, osprey, spruce grouse, ptarmigan, sandhill cranes, trumpeter swans, Canada geese, and great blue herons. Red-throated, Pacific, and common loon all occur around Kuiu Island. Several plover, yellowlegs, and sandpiper species occur mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Sea mammals known to inhabit the waters surrounding Kuiu Island are the Pacific white-sided dolphin, killer whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal. Sea otters occur on both eastern and western shores of Kuiu Island. They are expanding their range northward into Keku Strait.

Amphibians known to occur on Kuiu Island include rough-skinned newt, western toad, and wood frog. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts. Wood frogs are found in most of the ecosystems found in Southeast Alaska except for marine, estuarine, and riverine.

**(5) Management Direction and Current Uses:** The roadless area was allocated to three Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These three LUDs are Timber Production, Semi-remote Recreation, and Wild River.

| LUD | Acres |
|---|---|
| Timber Production | 9,393 |
| Semi-remote Recreation | 25,169 |
| Wild River | 935 |

Approximately 27 percent of the roadless area was allocated to one development LUD, Timber Production. Land allocated to this LUD is located primarily in the south and southeast.

Most of the roadless area, approximately 73 percent, was allocated to non-development LUDs (Semi-remote Recreation, Wild River). Approximately 70 percent of the roadless area, including the small associated islands, is allocated to the Semi-remote Recreation LUD. Land in the Fall Dog Creek area was allocated to the Wild River LUD, accounting for approximately 3 percent of the roadless area. Fall Dog Creek Wild River drains into Security Bay.

The decision on the Crane and Rowan Mountain Timber Sale Final EIS (1998) approved road construction and timber harvest in the southern portion of the roadless area. Approximately 150 acres are included. The Rowan Mountain Timber Sale is currently under contract. No other timber harvest activities are currently proposed, but the part of the roadless area that is classified as development LUD is identified for potential future timber harvest on the 10-year timber sale schedule.

Personal resource use by logging camp residents when timber sales are active currently occurs in the vicinity of Security Bay. Kake residents also participate in subsistence fishing and hunting and favor waterfowl hunting in Security Bay. Recreation uses include bear, deer, and waterfowl hunting; coho salmon, chum salmon, pink salmon, and steelhead fishing; sea kayaking; camping; beachcombing; and viewing from marine areas. The absence of cabins or commercial overnight facilities limits use by fly-in recreationists. Security Bay is a popular anchorage for commercial fishermen and recreational boaters.

**(6) Appearance (Apparent Naturalness):** The area is essentially unmodified. Some evidence of past occupancy is present at the abandoned fox farms located on adjacent islands, and at the fish camps and the cannery site at Washington Bay and a harvest unit to the south of Washington Bay. Several timber harvest areas outside the roadless area are visible, as is a private residence on the east side of Security Bay from within Security Bay and other locations within the area.

**(7) Surroundings (External Influences):** Areas east of, and adjacent to, the Security Roadless Area are heavily modified by past and present timber harvest activities centered around Rowan Bay. Forest Road 6402 runs north from Rowan Bay and connects with Security and Saginaw Bays. It continues to serve as a major access route for hauling logs. Modifications on lands adjacent to this route will continue to occur under current management direction, as the area is allocated for timber management. Land on the east side of Security Bay has been conveyed to the State for a marine park. A private residence also exists there.

**(8) Attractions and Features of Special Interest:** The area includes the west side of Security Bay; all of Washington Bay; a portion of Rowan Bay, which would be roaded under a current timber sale contract; and two Lighthouse Reserves, one south of Washington Bay and one near Kingsmill Point. The area contains three inventoried recreation places, which cover 2,821 acres, or 8 percent of the roadless area. The most important of these recreation places includes the Salt Chuck at the head of Security Bay, which is known to be particularly good for waterfowl hunting. The presence of anchorage sites within Washington Bay and along shorelines in Security Bay and Rowan Bay are noteworthy.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The area on the east side of Security Bay has been dropped, as has a small roaded area on the southwest end of the bay. Several small areas were excluded from the area 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 is essentially unmodified; however, the landscape is influenced by development on the eastern boundary. Also, some evidence of past occupancy is present at the abandoned fur farms located on adjacent islands, and at the fish camps and the cannery sites at Washington Bay. Natural processes are essentially unaltered over the remainder of the area. The natural appearance which the majority of the area possesses, is consistent with the potential classification of this area as wilderness.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and primitive recreation within the area. Use of floatplanes and motorboats may disrupt visitors for brief periods. Noise from timber management activities on the roads east and south of the area can be heard during periods of activity. Present recreation use levels within the roadless area are low; however, Security Bay is used by commercial fishermen and by those staying at the camp at Rowan Bay. Generally a person camped along the shore would have a moderate chance of seeing others.

Traveling by boat into the area requires extended boating time in exposed waters, challenging the skills of even experienced skippers. The roadless area contains steep terrain that presents challenging hiking conditions. 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) | 9,007 | 25% |
| Semi-Primitive Non-Motorized (SPNM) | 14,969 | 42% |
| Semi-Primitive Motorized (SPM) | 9,922 | 28% |
| Roaded Modified (RM) | 1,579 | 4% |
| Rural (R) | 19 | 0% |

The area contains three inventoried recreation places, which cover 2,821 acres, or 8 percent of the roadless area. The most important of these recreation places includes the Salt Chuck at the head of Security Bay, which is known for particularly good waterfowl hunting.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPNM | 0 | 0 |
| SPM | 3 | 2,796 |
| RM | 1 | 25 |
| 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 no developed recreation facilities. Outfitters and guides use the area. Forest Service records show that three outfitters/guides used this area in 2000 for a total of 17 service days for remote setting nature tours and 2 service days for black bear hunting.

**(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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Security Roadless Area was given a rating of 25 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 effects of the developments and activities on adjacent areas on wilderness attributes of this area.

**(4) Ecologic and Geologic Values:** The area is separated from other roadless areas and wilderness areas by Frederick Sound and Chatham Strait on the north and west, and by roaded and harvested areas and Rowan Bay to the south and east. It is relatively isolated on a peninsula on the northwest end of Kuiu Island. Approximately half the area, mostly the higher elevations, is not forested. However, the lower elevations contain interconnected stands of medium- and high-volume, old-growth forest. Little timber management has occurred in this area.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) lists VCUs 400 and 402 surrounding Security and Rowan Bays, respectively, as primary producers of salmon.

The boundary of this roadless area does not include the larger streams within VCU 402. Neither is listed as a primary sport fish producer.

An unnamed stream on the west coast of this roadless area contains 0.7 mile of Class I stream and 2.8 miles of Class II stream habitat. Approximately one mile of coho habitat is present here. Small numbers of pink and chum salmon may use the lower reaches of this creek, but several partial barriers are present upstream. Both Dolly Varden char and cutthroat trout are present upstream.

Fall Dog Creek has high commercial and historic values for chum salmon. Fall Dog Creek has a unique November spawning run of chum salmon that is used for subsistence. The salmon also attract a large number of black bears and eagles. Fall Dog Creek meets the guidelines for Wild River classification for 4 miles under the National Wild and Scenic Rivers System.

**(b) Wildlife Resources:** Deer winter habitat is generally found on southern aspects at low to moderate elevations in multi-canopied forests. High quality deer winter habitat can be found along the beach fringe of Chatham Strait and Washington Bay. Information from the Crane and Rowan Mountain Timber Sales EIS (USDA Forest Service, 1998) indicates that this area also supports habitat for otter, mink, marten, bald eagle, Arctic and American peregrine falcons, osprey, trumpeter swan, northern goshawk and Canada geese. There are no known concentrations of marine wildlife or sea lion haul-out sites but humpback whales are known to use the waters off Kuiu Island. Sea otters occur in the waters to the east and west of Kuiu Island. They are expanding their range northward into Keku Strait.

Rowan Bay and the Rowan Mountain area have the highest wildlife values in the roadless area. The Salt Chuck at the head of Security Bay is known for high-quality waterfowl hunting. Black bear populations on Kuiu also attract numerous hunters. Based on data compiled from 1985 to 1994, VCU 400 surrounding Security Bay is listed among the top 25 percent of VCUs for black bear harvest. VCU 402 surrounding Rowan Bay is listed among the second 25 percent (ADF&G, 1998). The area serves as a medium old-growth habitat reserve on the northern portion of the island. Old-growth Habitat reserves are part of the Forest-wide wildlife conservation strategy included in the Forest Plan.

**(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. Wintering in ice-free areas throughout the Tongass, trumpeter swans may be seen migrating through Rowan Bay and Security Bay. 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. Goshawk nests have been located in the Security Bay and Rowan Creek drainages. In addition, 12 sensitive plant species are known or suspected to occur in the Petersburg Ranger District.

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

**(5) Scientific and Educational Values:** The abandoned cannery sites, fish camps, and fish traps attract some visitors and could be used for education/interpretation of the history of the area. If facilities are developed in the Security Bay State Marine Park, the use of the roadless area may increase, increasing opportunities for interpreting the history of the area.

**(6) Scenic Values:** The west-facing slope in this area appears unmodified from a major travel way used by cruise ships. It is from this vantage that one can see displays of distinctive characteristics similar to those of the Baranof Highlands along the exposed coastline. Viewing the area from Security Bay, the terrain slopes more gently toward the water, but several timber harvest areas are also visible outside the roadless area.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Frederick Sound, which is a part of the Alaska Marine Highway and tour ship route, as well as a saltwater use area; Chatham Strait, a tour ship route; Security and Washington Bay, which are saltwater use areas; and the Security Bay State Marine Park.

Fifty-five percent of this area was inventoried as Variety Class A (possessing landscape diversity that is unique for the character type. About 37 percent was inventoried as Variety Class B (possessing landscape diversity that is common for the character type), and 7 percent was inventoried as Variety Class C (possessing a low degree of landscape diversity).

About 95 percent of this roadless area was inventoried in Existing Visual Condition (EVC) I, where only ecological change has occurred. Two percent was inventoried in EVC Type 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.

**(7) Social, Cultural, and Historical Values:** North Kuiu Island is in the traditional territory of the Kake Tlingit. Past use is indicated by the remains of villages, temporary camps, forts, gardens, fish traps, pictographs, petroglyphs and culturally modified trees. Historic period sites in the area consist of a herring reduction plant and cannery in Washington Bay, and fur farms and troller camps in Security Bay. Kake residents maintain close cultural and spiritual ties to Security Bay. It continues to be an important subsistence resource gathering, hunting and fishing location. The roadless area is in three VCUs: 400, 401, and 402. VCU 400 and VCU 402 surrounding Security and Rowan Bays, respectively, are listed among the VCUs with the highest community use value. None of the 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:** The northeastern, northern and western boundaries of this area are adjacent to saltwater. The remaining portions border developed areas. The lower slopes adjacent to Rowan and Security Bays are likely to continue to be managed in a roaded condition. However, the remaining area has steep slopes and dissected terrain and will likely remain unroaded, regardless of classification, due to infeasibility of road construction. Forest Road 6425 runs parallel to the eastern shore of Security Bay, and harvest units adjoin the roadless boundary. Potential for development of private land or land within the State marine park could also influence future manageability.

## 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 area is relatively close to Kake, which is a stop on the Alaska Marine Highway. Potential sites exist for boat ramps, public recreation cabins, and shelters. There is potential for additional outfitter and guide permits.

**(2) Subsistence Uses:** Wilderness designation would not adversely affect current subsistence uses.

**(3) Fish Resources:** No fish habitat enhancement projects have been identified for this area.

**(4) Wildlife Resources:** No wildlife habitat enhancement projects have been identified for this area. The area includes a medium old-growth habitat reserve on the northwest portion of Kuiu Island.

**(5) Timber Resources:** There are approximately 23,619 acres mapped as productive old growth in the roadless area. Approximately 573 acres are second growth in small patches near the cannery site where pilings and fuel were obtained from 1930-1950. Of these, approximately 12,460 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), 1,510 acres or 4 percent of this roadless area are estimated to be suitable for timber production. Approximately 1,131 of the suitable acres are mapped as high-volume old growth; of these acres, 123 are mapped as high-volume, coarse-canopy old growth.

An industrial camp was developed at nearby Rowan Bay in support of timber management operations. Extensive development has occurred east of the roadless area. Much of the area's timber could be economically harvested by helicopter yarding from saltwater or existing roads, or by extending existing roads.

**(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 areas with high mineral development potential in the area. There are no valid mining claims in the area. The roadless area contains 12,544 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have very low potential for development.

**(8) Transportation and Utilities:** There are no travel corridors or utility corridors in the roadless area. The Rowan Mountain Timber Sale will extend an existing road approximately 2 miles west into the southern portion of the roadless area. The road was expected to be built in 2002.

**(9) Water Availability and Use:** There are no developed recreation sites or other facilities located in this roadless area. As a result, demand does not exist for domestic water use. There are no existing or planned hydroelectric or domestic water projects.

**(10) Areas of Scientific Interest:** This area contains no Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** Forest Service records show that three outfitters/guides used this area in 2000 for a total of 17 service days for remote setting nature tours and 2 service days for black bear hunting.

**(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:** There has been interest expressed in retaining the roadless character of unroaded parts of Kuiu Island, including the head of Security Bay.

**(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 Bill did not include this area. In 2001, HR 2908 did not propose this area for wilderness but it 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:** The City of Kake suggested that Security Bay be designated as wilderness because it was the most important subsistence area left to the Village of Kake. They wanted old growth protected, especially on the west side of Security Bay (i.e., the Security Roadless Area). The City of Kupreanof commented that the area should be preserved as a wilderness because of its subsistence value. The Narrows Conservation Coalition wanted the area managed as Primitive Recreation. The Point Baker Community Council and the Sitka Conservation Society also opposed logging because of the effects on primitive recreation, scenic quality, subsistence uses, fish and wildlife, salmon, and landslide prone areas. Other comments supported managing the area as old growth and prohibiting logging because of the adverse effects on major subsistence streams, archaeological sites, commercial fishing, Alaska Natives, the State marine park, and on private property. However, the timber industry felt that all areas not designated as wilderness or as LUD II should be managed for 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. Others supported continued development on the Tongass.

**(e) Public Input Expressed for Project-level EISs and Other Input:** Public input was received on the Crane and Rowan Mountain Timber Sale EIS. The Southeast Alaska Conservation Council stated that no decision should be made until the roadless issue is decided at the national level. The City of Kake commented that subsistence use would be adversely affected by timber harvest, including the cultural and spiritual value of participating in traditional subsistence harvests in the old-growth forests used by the ancestors of the Tlingit residents of Kake for countless generations. Logging and road building in these sacred places permanently and irreparably degrades an important cultural experience. They stated that courts have recognized that ANILCA protects this value. This position was supported by the Southeast Alaska Conservation Council, the Earthjustice Legal Defense Fund, and other commenters. The Alaska Forest Association supported roads and timber harvest.

**(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 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 Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 240 for permanent protection as LUD II. SEACC recommended the remaining unlogged portions of northern Kuiu Island should be protected by LUD II designation.

Some individuals wanted protection for Washington Bay. Some individuals recommended the entire area for permanent protection as wilderness.

**(2) Nearby Roadless and Wilderness Areas and Uses**: The Bay of Pillars Roadless Area and the Tebenkof Bay Wilderness are south of the Security Roadless Area, across the mouth of Rowan Bay. Most of south Kuiu Island is unroaded. Across Chatham Strait, about 10 miles to the west, is the South Baranof Wilderness. These areas receive light use.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 100 | 115 |
| Petersburg (Pop. 3,224) | 50 | 110 |
| Wrangell (Pop. 2,308) | 75 | 110 |
| Ketchikan (Pop. 14,070) | 135 | 170 |

Kake, approximately 15 air miles away, and Petersburg are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Security Roadless Area is located on the northwest side of Kuiu Island. Chatham Strait lies to the west, Security Bay to the northeast, and Frederick Sound to the north. A developed area lies to the east. The Security Roadless Area is generally characterized as complex terrain dominated by rugged mountains, many of which reach elevations of over 3,000 feet. Between the mountains are deep, broad valleys containing several sizable streams.

The area is mostly unmodified; however, it is influenced by developments along the eastern boundary. The natural integrity is high and the apparent naturalness of the area is very high. The opportunity for solitude is high and the opportunity for primitive recreation is very high.

Approximately 55 percent of the landscape is considered distinctive for the character type from a scenery perspective. The area also has high cultural and historic values.

The roadless area includes about 14,995 acres of high-volume, old-growth forest. Of these acres, 4,361 are mapped as high-volume, coarse-canopy old growth.

The Security Roadless Area is classified as being in the Kuiu Island Biogeographic Province and makes about 7 percent of the province. It is one of eight inventoried roadless areas found within the province that collectively make up about 53 percent of the province. The Tebenkof Bay and the Kuiu Wildernesses are located in this province and make up about 26 percent of the province. The province also includes the Sumner, Conclusion, and associated islands LUD II area, which make up about 1 percent of the province.

The Security Roadless Area lies completely within the Kuiu-Prince of Wales Fjordlands Ecological Section and represents 3 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 (81 percent) of the roadless area is in the Kuiu-Prince of Wales Granitics Ecological Subsection; this portion of the roadless area represents 19 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. The remaining 19 percent of the roadless area is in the Rowan Sediments Ecological Subsection; this portion of the roadless area represents 5 percent of the entire ecological subsection, 27 percent of which is protected in existing wilderness and 27 percent in existing non-development LUDs.

The Security 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 this area in an unroaded condition, and there is some support for designating it as wilderness. Designation would create a wilderness that has high scenic, cultural, and historic values. The roadless area also includes a large amount of contiguous productive old growth in contrast to much of the surrounding lands, which have had intensive timber harvest that have fragmented the stands of old growth in those areas. 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 Security Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 73 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 27 percent. The land in the development LUDs provides an estimated 1,510 acres that are suitable for timber production (1 percent of the suitable acres on the Petersburg Ranger District). Approximately 123 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains 12,544 acres of undiscovered locatable mineral resources; all of the acres are considered to have very low potential for development. The timber, 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 allowed by the Forest Plan in the southern and western portions of the area. The high value cultural, historic and most scenic values and old growth are protected under the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use 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 very high cultural, historic, 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. No timber harvest would be allowed and the recreation, minerals, and special uses 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, including the very high 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 240 (in acres) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Land Use Designation** | **Alt 1** | **Alt 2** | **Alt 3** | **Alt 4** | **Alt 5** | **Alt 6** | **Alt 7** | **Alt 8** |
| **Recommended Wilderness** | | | | | | | | 35,497 |
| **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** | 25,169 | 25,169 | 25,169 | 25,169 | 25,169 | | 25,169 | |
| **Recommended LUD II** | | | | | | 35,497 | | |
| **LUD II** | | | | | | | | |
| **Wild, Scenic, Recreational River** | 935 | 935 | 935 | 935 | 935 | | 935 | |
| **Experimental Forest** | | | | | | | | |
| **Scenic Viewshed** | | | | | | | | |
| **Modified Landscape** | | | | | | | | |
| **Timber Production** | 9,393 | 9,393 | 9,393 | 9,393 | 9,393 | | 9,393 | |
| **TOTAL** | **35,497** | **35,497** | **35,497** | **35,497** | **35,497** | **35,497** | **35,497** | **35,497** |
| **Suitable Timber Lands** | 1,510 | 1,510 | 1,510 | 1,510 | 1,510 | 0 | 1,510 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** North Kuiu (241)

**ACRES (NFS):** 9,544

**BIOGEOGRAPHIC PROVINCE:** Kuiu Island

**ECOLOGICAL SECTION:** Kuiu-Prince of Wales Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 15

### I. Overview and Description

**(1) Location and Access:** The North Kuiu Roadless Area is located near the center of the northern portion of Kuiu Island. Roads surround the area and provide access to Rowan Bay. Petersburg is approximately 40 air miles from the roadless area. Kake, the nearest town, is located approximately 10 air miles away on nearby Kupreanof Island. Petersburg and Kake are served by the Alaska Marine Highway and Petersburg has daily jet service. Access to the roadless area is by chartered floatplane or boat to Kuiu Island, then by land. There are no sites suitable for landing wheeled aircraft. Access into the interior is by foot or helicopter.

**(2) History:** The area is within the traditional territory of the Kake Tlingit. No known cultural resources have been recorded. The probability of cultural resources being found within this area is low, since no shoreline or other areas of high site probability, such as large anadromous streams, lakes or raw material sources, occur in this area.

**(3) Geography and Topography:** The predominant landforms of this area are the Rowan Sedimentary Hills, with a few areas of Saginaw Limestone on the eastern portion of the roadless area. Landforms are characterized by rolling terrain, and consist mostly of ridges and upper slopes between Saginaw Bay and Security Bay. Bedrock lithology consists mostly of sedimentary rocks, primarily mudstone, greywacke, turbidites, and calcareous mudstones that are part of the Bay of Pillars formation. These rocks are Silurian in age (400 to 440 million years ago). The bedrock lithology in the karst area is characterized by limestone, dolomite, and chert that form conspicuous cliffs. These carbonate rocks often contain fossils, and are interlayered with siltstone, sandstone and some volcanic rocks. These formations are known primarily as the Pybus formation, Halleck formation, the Kuiu limestone, and the Saginaw Bay formation. These rocks range in age from late Silurian to early Permian (250 to 420 million years ago). The landscape has been drastically altered by glaciation. Thick glacial till covers much of the moderately-sloping areas, especially at lower elevations.

The upper reaches of Saginaw and Straight Creeks are located in this area. Elevations range between 1,000 and 2,000 feet. Generally, slopes are moderate with little relief. Vegetation is almost uniformly spruce-hemlock forest. This area is mapped with 9 acres of rock and no acres of ice, snow or alpine features. The roadless area has no saltwater shoreline.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Kuiu Island Biogeographic Province. This province is generally characterized by rolling, subdued topography and extensive muskeg areas, but may have rugged terrain in localized areas.

Ecological Section/Subsection. The North Kuiu Roadless Area is contained entirely within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F), represented by two ecological subsections (see table below). The Rowan Sediments Ecological Subsection forms approximately three-quarters of the Security Roadless Area. Glacially smoothed hills and broad valleys carved from sedimentary rock on northcentral Kuiu Island support highly productive hemlock or hemlock-spruce forests in this subsection. Valley bottoms contain a variety of wetlands that have developed in poorly drained organic soils. The North Prince

of Wales-Kuiu Carbonates Ecological Subsection, approximately one-quarter of the roadless area, is composed of limestone and marble karstlands that 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 | Rowan Sediments | 74% |
| | North Prince of Wales- Kuiu Carbonates | 26% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. Bedrock generally weathers to a silty or loamy texture, with a high percentage of sharp, angular rock fragments. In general, well-drained or moderately well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly-drained soils developed on less-sloping areas, such as glacial valleys and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg. Alpine soils, generally above 2,000 feet in elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky.

Drainage density varies from 3.2 to 3.7 miles/1,000 acres. Watersheds are relatively large, with main channels flowing through broad glacial valleys. In the limestone ridge areas, stream systems are largely controlled by the northwest-southeast orientation of the bedrock strata. Low gradient streams in that area are typically associated with fen wetlands. Some of the area is drained by underground stream systems where karst is well developed.

**(c) Vegetation:** Vegetation of this roadless area primarily consists of spruce/hemlock forests. Nearly all of the well-drained hill slope positions are occupied by the highly productive western hemlock/blueberry/shield fern pant associations. This plant community forms rather large contiguous forested areas. Alpine ecosystems are rare; however, the hilltops commonly have subalpine (mountain hemlock) plant communities. Muskeg ecosystems and muskeg-scrub forest complexes are extensive in broad glacial valleys. Muskegs occupy low-lying, poorly-drained portions of the area. Wetland fen communities are common on toe slope positions below the limestone ridges. About 20 percent of the area is occupied by wetlands.

There are approximately 9,456 acres mapped as forest land, of which 8,479 acres or 90 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 5,932 acres or 70 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 3,408 acres of high-volume, coarse-canopy old growth. There is no mapped second-growth forest due to timber harvest.

**(d) Fish Resources:** This roadless area contains primarily the Class III headwaters of Kadake Creek, Strait Creek, Saginaw Creek and Security Creek. No known salmon spawning or rearing areas occur within the roadless area boundary.

**(e) Wildlife Resources:** Sitka black-tailed deer, moose, beaver, river otter, marten, wolves and black bear inhabit this roadless area. Black bears are especially abundant on the north end of Kuiu Island. Other terrestrial mammals include bats, mink, muskrat, ermine, red squirrel, mice, shrews, and voles. There are occasional sightings of fisher and wolverine, but these are considered incidental species at the edge of their range.

Bird species include bald eagles, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, marbled murrelets, osprey, spruce grouse, ptarmigan, sandhill cranes, trumpeter swans, Canada geese, and great blue herons. Red-throated, Pacific, and common loon all

occur around Kuiu Island. Several plover, yellowlegs, and sandpiper species occur, mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Sea mammals known to inhabit the waters surrounding Kuiu Island are the Pacific white-sided dolphin, killer whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion and harbor seal. Sea otters occur in the western areas of Sumner Strait off southern Kupreanof Island and on both eastern and western shores of Kuiu Island. They are expanding their range northward into Keku Strait.

Amphibians known to occur on Kuiu Island include rough-skinned newt, western toad, and wood frog. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests and in clearcuts. Wood frogs are found in most of the ecosystems found in Southeast Alaska except for marine, estuarine and riverine.

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

| LUD | Acres |
|---|---|
| Timber Production | 8,810 |
| Recreational River | 349 |
| Old-growth Habitat | 385 |

The majority of this roadless area, 92 percent, was allocated to the development LUD, Timber Production.

Approximately 8 percent of the roadless area was allocated to non-development LUDs (Old-growth Habitat, Recreational River). The Old-growth Habitat LUD was assigned to approximately 4 percent of the roadless area. Most of this area is in the north-central part of the roadless area. It is part of a small old-growth habitat reserve, a portion of which is in a roaded area, just south of Saginaw Bay. Approximately 4 percent of the roadless area was allocated to the Recreation River LUD, which is located around north Kadake Creek. Because this portion of the Recreation River LUD adjoins the Timber Production LUD, road construction is allowed and should accommodate passenger car public access.

Road systems and timber management activities surround this roadless area. The Crane Timber Sale recently harvested timber and built a new road in the southeast portion of the roadless area, thus reducing the area. New road construction will probably continue to occur in this area.

There are no developed recreation sites and there were no outfitter/guide permits issued for the area in 2000. Deer hunting is the primary recreational use. Most of this use is concentrated along the road-accessible areas outside of the roadless area. Overall, use levels are low compared to use levels on other areas of the Petersburg Ranger District. There is some subsistence use in the area.

**(6) Appearance (Apparent Naturalness):** The majority of the area appears unmodified. The area near the boundary has been heavily influenced by adjacent management activities, mainly timber harvest and roads.

**(7) Surroundings (External Influences):** Timber management developments on National Forest System land occur on all sides of the roadless area. Users may be disturbed by vehicle use and timber sale activity, which occur

periodically. Most of the roadless area is within one mile of a road. The sight and sound of low-flying aircraft may occasionally be noticed by persons in the area.

**(8) Attractions and Features of Special Interest:** There are no special attractions or features in this roadless area. The area contains no inventoried recreation places.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** Areas within the 1989 boundary have been roaded and/or harvested since the 1989 analysis. These areas have been dropped from the roadless area. An unroaded area west of the 1989 roadless area boundary has been added. Several small areas were excluded from the area 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 is unmodified, however its overall appearance is affected by the developments that surround the area. The irregular shape of the area, patterns of adjacent timber management and roads affect the area's natural integrity, making it poorly suitable for wilderness classification.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences and Primitive Recreation:** There is a low to moderate opportunity for solitude within the area. Vehicle traffic occasionally passes nearby and may be heard and seen by people in this roadless area. Most of the roadless area is within a mile of the boundary. There may also be long periods where no vehicle traffic exists, as traffic is generally a function of adjacent or nearby timber management activities. Overall, recreation use levels are low, being higher along the fringes near roads. Generally, a person camped or traveling inland is unlikely to see others.

Travel within the area is less challenging than in many other roadless areas in Southeast Alaska because of the relatively gentle topography and the relatively small size of the roadless area. The presence of black bears adds an element of risk to camping or hiking 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 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 recreation opportunities primarily in a roaded 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 |
|---|---|---|
| Roaded Modified (RM) | 9,544 | 100% |

No inventoried recreation places are found within this roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| RM | 0 | 0 |

There are no developed recreation opportunities in this area. Outfitter/guide use is low or non-existent. No permits were issued in 2000. The vegetation and the rolling nature of the landform do allow a visitor to feel remote from the sights and sounds of human activity. The area is difficult to access due to the logistics of getting to Kuiu Island, and then having to travel inland.

**(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 original Analysis of the Management Situation Developed in support of the Forest Plan Revision. At that time, the North Kuiu Roadless Area was given a rating of 19 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. This rating reflects the developments surrounding this relatively small area and their effects on all wilderness attributes.

**(4) Ecologic and Geologic Values:** There are no unique ecologic or geologic values in the roadless area other than the karst features in the northeast portion of the area.

**(a) Fish Resources:**. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed all three VCUs (399, 400, and 421) as primary salmon producers, and only VCU 421 as a primary sportfish producer as well. Only the headwaters of the streams in these VCUs are within the roadless area boundary

The Class III headwaters of Kadake Creek are included in this roadless area. Kadake Creek is the largest producer of salmon on Kuiu Island, producing cutthroat trout; steelhead; Dolly Varden char; and pink, chum, and coho salmon. The Alaska Department of Fish and Game lists the creek as one of the 19 "high value" watersheds in Southeast Alaska. Most of the stream is accessible for spawning and rearing of coho salmon and steelhead. Pink and chum salmon spawning habitat is limited to the lower portions of the watershed where a lower gradient, floodplain channel is present. According to ADF&G data, average annual peak escapements are 150 chum and 36,500 pink salmon.

**(b) Wildlife Resources:** A population of Sitka black-tailed deer, wolves, and black bear range over the roadless area. Deer winter habitat is generally found on southern aspects at low to moderate elevations in multi-canopied forests. There is little or no high quality deer winter habitat in this area. Based on data compiled from 1985 to 1994, VCUs 399 and 400 are listed among the top 25 percent of VCUs for black bear harvest. The remaining VCU, 421, is listed among 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. 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 Petersburg Ranger District.

**(d) Karst, Cave, and other Geologic Resources:** There are two bands of low, medium, and high vulnerability karst running north to south and covering approximately 2,270 acres, or 24 percent of this roadless area. Close to half of the karst resources are mapped as high vulnerability.

**(5) Scientific and Educational Values:** The area contains no known features of special interest other than the two bands of karst.

**(6) Scenic Values:** The area is unmodified, however, its overall integrity is not pristine. The irregular shape of the area, patterns of adjacent timber management, and roading have affected the natural appearance of the landscape.

Visual Priority Routes and Use Areas identified by the Forest Plan, within or near the roadless area, include Kadake Bay, a saltwater use area; and the community of Kake.

Approximately 48 percent of this roadless area was inventoried in Variety Class B (possessing landscape diversity that is common for the character type). The remaining 52 percent was inventoried in Variety Class C (possessing a low degree of landscape diversity).

Much of the roadless area, 66 percent, was inventoried in Existing Visual Condition (EVC) I; these areas appear to be untouched by human activity. EVC IV accounts for 3 percent of the roadless area, where changes in the landscape are easily noticed by the average person and may attract some attention, but it resembles natural patterns. The remaining 32 percent of the area is in EVC V, where changes to the landscape are obvious to the average person, and appear to be major disturbances.

**(7) Social, Cultural, and Historic Values:** The area is within the traditional territory of the Kake Tlingit. There are no known cultural resource sites in the area. There are no developed recreation sites and there was no outfitter/guide use in 2000. Some subsistence hunting probably occurs in the area via access by existing roads that surround the roadless boundary. All three VCUs were listed among the VCUs with the highest community use value and none of them 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:** There are no well defined topographical boundaries. The area is bounded on all sides by roads and timber management activities. Some of the harvest units have affected parts of the core of the roadless setting. There are few topographic breaks or other natural features to define the area. Feasibility of management in a wilderness is low, due to the amount of timber harvest activity adjacent to this roadless area, and its relatively small size and irregular shape.

## 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 area is relatively close to Kake, which has Alaska Marine Highway service. A very small portion of Kadake Creek, a Recreational River, is in the northeast portion of this roadless area. There is little potential for outfitter and guide permits given the difficulty in accessing the area and the habitat conditions.

**(2) Subsistence Uses:** Management of the area as a wilderness or in an unroaded condition would not affect current use patterns.

**(3) Fish Resource:** There are no fisheries enhancement activities proposed for this roadless area.

**(4) Wildlife Resource:** No wildlife habitat improvement projects are currently planned.

**(5) Timber Resource:** There are approximately 8,479 acres of productive old growth and no second growth due to harvest mapped in the roadless area. Of this, approximately 5,665 acres are classified as tentatively suitable for harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 3,538 acres or 37 percent of this roadless area are estimated to be suitable for timber production. Approximately 2,710 of the suitable acres are mapped as high-volume old growth; of these acres, 1,545 are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area is dependent on market values. A road system and/or logging systems capable of harvesting the area would be necessary. Nearby roads could be extended to accomplish much of this. The Crane Timber Sale has harvested timber and built a new road that has reduced the southeast portion of the 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 in the roadless area.

**(7) Minerals:** The roadless area contains an estimated 9,544 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). Approximately 5,084 of these acres are considered to have moderate potential for development.

**(8) Transportation and Utilities:** There are no transportation or utility corridors identified in this roadless area. The existing road system that surrounds the area could be extended into the area to access timber resources in the 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:** The mapped karst resources encompass approximately 2,270 acres or 24 percent of the roadless area. The area does not include any Potential Research Natural Areas or been identified for any other scientific purpose.

**(11) Land Use Authorizations:** Currently, there are no special use permits that have been issued for this area.

**(12) Land Status:** The roadless area is entirely National Forest Systems lands.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Local users and residents have not expressed interest in this area specifically.

**(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 Bill did not include this area. In 2001, HR 2908 did not propose this area for wilderness but it did propose a portion of this area 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:** There were no specific comments on this area. The City of Kupreanof commented that the general area (North Kuiu Island) should be preserved as a wilderness because of its subsistence value. The Narrows Conservation Coalition wanted the general area managed as Primitive Recreation. The Point Baker Community Council and the Sitka Conservation Society also opposed logging on North Kuiu Island because of the effects on primitive recreation, scenic quality, subsistence uses, fish and wildlife, salmon, and landslide-prone areas. Other comments supported managing the forests on North Kuiu as old growth and prohibiting logging because of the possible adverse effects on major subsistence streams, archaeological sites, commercial fishing, Alaska Natives, and on private property. However, the timber industry felt that all areas not designated as wilderness or as LUD II should be managed for 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. Others supported continued development on the Tongass.

**(e) Public Input Expressed for Project-level EISs and Other Input:** Public input was received on the Crane and Rowan Mountain Timber Sale EIS. The Southeast Alaska Conservation Council stated that no decision should be made until the roadless issue is decided at the national level. The City of Kake commented that subsistence use would be adversely affected by timber harvest, including the cultural and spiritual value of participating in traditional subsistence harvests in the old-growth forests used by the residents of Kake for countless generations. The concern expressed was that logging and road building in places regarded as sacred would permanently and irreparably degrade an important cultural experience. They stated that courts have recognized that ANILCA protects this value. This position was supported by the Southeast Alaska Conservation Council, the Earthjustice Legal Defense Fund, and other commenters. The Alaska Forest Association supported roads and timber harvest.

**(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 the remaining unlogged portions of northern Kuiu Island should be protected by LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 241 for permanent protection as LUD II.

A number of cave/karst experts and other individuals stated that this area contains moderately to highly developed karst that should be protected along with their drainage basins.

Some individuals recommended protection of Threemile Arm and Port Camden.

**(2) Nearby Roadless and Wilderness Areas and Uses:** This roadless area does not border any other roadless area. The nearest roadless areas are Keku, Security, Camden, and Bay of Pillars. All are within eight miles of this roadless area. The Tebenkof Bay Wilderness is also located on Kuiu Island, about 15 miles to the south of the North Kuiu Roadless Area. The Kuiu Wilderness is adjacent to the Tebenkof Bay Wilderness.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 105 | 110 |
| Ketchikan (Pop. 14,070) | 135 | 150 |
| Wrangell (Pop. 2,308) | 70 | 110 |
| Petersburg (Pop. 3,324) | 40 | 90 |

Kake is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The North Kuiu Roadless Area is located near the center of the northern portion of Kuiu Island. Developed lands surround the area and provide access to Rowan Bay. The roadless area is characterized by rolling terrain with drainages in all directions. The area consists mostly of the ridges and upper reaches of these drainages. Elevations range between 1,000 and 2,000 feet. Generally, slopes are gentle with little relief. The roadless area does not connect with saltwater.

The roadless area is heavily influenced by surrounding developed areas and associated activities. The natural integrity and apparent naturalness is moderate. The opportunity for solitude is low and the opportunity for primitive recreation is moderate.

The roadless area contains no landscapes considered distinctive for the character type from a scenery perspective. The area has zones of karst. There are no other known significant or unique features or values in this roadless area.

The roadless area includes about 5,932 acres of high-volume, old-growth forest. Of these acres, 3,408 are mapped as high-volume, coarse-canopy old growth.

The North Kuiu Roadless Area is classified as being in the Kuiu Island Biogeographic Province and makes about 2 percent of the province. It is one of eight inventoried roadless areas found within the province that collectively make up about 53 percent of the province. The Tebenkof Bay and the Kuiu Wildernesses are located in this province and make up about 26 percent of the province. The province also includes the Sumner, Conclusion, and associated islands LUD II area, which make up about 1 percent of the province.

The North Kuiu 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 (74 percent) of the roadless area is in the Rowan Sediments Ecological Subsection; this portion of the roadless area represents 5 percent of the entire ecological subsection, 27 percent of which is protected in existing wilderness and 27 percent in other existing non-development LUDs. The remaining 26 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 protected in LUD II and 25 percent in other existing non-development LUDs

The North Kuiu 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 3 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some support for managing this area in an unroaded condition, and little support for designating it as wilderness. Designation would create a relatively small wilderness that is heavily influenced by developments and activities on adjacent lands. The roadless area does have a relatively high amount of contiguous old growth in contrast with the surrounding lands where timber harvest has heavily fragmented the stands of old growth. 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 North Kuiu Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 8 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 92 percent. The land in the development LUDs provides an estimated 3,538 acres that are suitable for timber production (2 percent of the suitable acres on the Petersburg Ranger District). Approximately 1,545 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains an estimated 9,544 acres of undiscovered locatable mineral resources; approximately 5,084 of the acres are considered to have moderate potential for development. The timber sales, 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 by the Forest Plan. Karst resources in the roadless area are protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use 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 karst resources and old growth, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the recreation, minerals, and special uses 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, including karst resources and old growth, would be provided long-term protection if designated wilderness.

# Appendix C

| Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 241 (in acres) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Land Use Designation** | **Alt 1** | **Alt 2** | **Alt 3** | **Alt 4** | **Alt 5** | **Alt 6** | **Alt 7** | **Alt 8** |
| **Recommended Wilderness** | | | | | | | | 9,544 |
| **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** | 385 | 385 | 385 | 385 | 385 | | 385 | |
| **Semi-remote Recreation** | | | | | | | | |
| **Recommended LUD II** | | | | | | 9,544 | | |
| **LUD II** | | | | | | | | |
| **Wild, Scenic, Recreational River** | 349 | 349 | 349 | 349 | 349 | | 349 | |
| **Experimental Forest** | | | | | | | | |
| **Scenic Viewshed** | | | | | | | | |
| **Modified Landscape** | | | | | | | | |
| **Timber Production** | 8,810 | 8,810 | 8,810 | 8,810 | 8,810 | | 8,810 | |
| **TOTAL** | **9,544** | **9,544** | **9,544** | **9,544** | **9,544** | **9,544** | **9,544** | **9,544** |
| **Suitable Timber Lands** | 3,538 | 3,538 | 3,538 | 3,538 | 3,538 | 0 | 3,538 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Camden (242)

**ACRES (NFS):** 40,395

**BIOGEOGRAPHIC PROVINCE:** Kuiu Island

**ECOLOGICAL SECTION:** Kupreanof Lowlands and Kuiu-Prince of Wales Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 23 (26, 19)

### I. Overview and Description

**(1) Location and Access:** The Camden Roadless Area is located on northeast Kuiu Island, southeast of Keku Strait. It is approximately 10 air miles south of Kake and about 35 air miles west of Petersburg. Kake and Petersburg are served by the Alaska Marine Highway and Petersburg has daily jet service. It is divided into two sections by Port Camden, a large bay. The roadless area is accessible by boat or floatplane on saltwater, or by road from Rowan Bay logging camp on the west side of Kuiu Island. Both shores of Port Camden have good anchorages. Access to the westside is available from the road system that forms the western boundary and comes near Port Camden and Kadake Bay in at least four places. There are no sites suitable for landing wheeled aircraft. There is no ferry service to Kuiu Island. Access to the interior is by foot or helicopter.

**(2) History:** The Port Camden area is in the traditional territory of the Kake Tlingit. A variety of cultural sites exist in the area, including villages, temporary camps, portage trails, fish traps, petroglyphs, and culturally modified trees. Historic period sites include gardens, fur farms, and cabins. A logging camp was developed at nearby Rowan Bay, which is still used during active timber sales. Road development has occurred south and west of this area. The roads that connect to Rowan Bay, across the isthmus, to Port Camden, and to Threemile Arm are primarily used for hauling logs to the transfer facility at Rowan Bay. Forest Road 6402 was constructed in 1986. Some beach logging has occurred along the shore.

**(3) Geography and Topography:** The Port Camden waterway is centered in this roadless area and bordered by the landforms in an east and west direction. The terrain is predominantly rolling hills of the Keku Volcanic Plateaus that are typically short, extremely broken, and benched are common. Bedrock lithology is dominated by extrusive igneous rocks. Rock types are primarily rhyolite, rhyodiorite, basalt, and other mafic extrusive rocks that have been extremely altered and brecciated in many areas. Volcanic conglomerate and volcaniclastic graywackes are scattered throughout the area. Volcaniclastic deposits and volcanic flows occur within this area, notably the area between Crane Creek and Kadake Bay on the west side of Port Camden. This landscape is much younger than the rest of Kuiu Island as these rocks are of Pleistocene age (less than 1 million years old).

The entire area was glaciated after the cessation of volcanism. The present landscape is largely the result of glacially eroded, alternating strata of volcanic flows. Southeast-facing slopes are long and relatively gentle, while northwest-facing slopes are typically steep and stair-stepped with numerous cliffs.

Elevations range from sea level to 1,500 feet. The area contains 67 miles of shoreline on saltwater. Freshwater lakes occupy 210 acres and small islands account for 155 acres, one of which is larger than 50 acres. Stream density is relatively low (2.6 miles/1,000 acres). In areas of volcaniclastic bedrock, actively eroding gullies (V-notches) are prominent features of the watershed and contribute a large amount of bedload sediment. There are no ice or snow, alpine, or rock features mapped in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Kuiu Island Biogeographic Province. It is generally characterized by rolling, subdued topography and extensive muskeg areas. Rugged terrain may be found in localized areas. The coastline area represents a richly varied ecosystem.

Ecological Section/Subsection. The Camden Roadless Area is contained mostly within the Kupreanof Lowlands Ecological Section (M247G) and also contains portions within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F). These areas are represented by five ecological subsections (see table below). The Sumner Strait Volcanics Ecological Subsection represents the majority, 89 percent, of the Camden Roadless Area. Water-resistant volcanic flows of relatively recent origin arise from lowland glacial deposits. The interplay of volcanic and glacial forces have left a landscape of shallow organic soils on long, gentle slopes and mineral soils on short, steep slopes. Productive hemlock, Alaska yellow cedar, and spruce forests are found on the steep slopes. Most of the remainder, 9 percent, of the Camden Roadless Area lies within the Kake Volcanics Ecological Subsection, which contains gently rolling hills of glacially reduced sedimentary and volcanic rock, usually below 1,000 feet elevation. Productive hemlock and spruce forests are found on the slopes (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kupreanof Lowlands | Sumner Strait Volcanics | 89% |
| | Kake Volcanics | 9% |
| Kuiu-Prince of Wales Fjordlands | Kuiu-Prince of Wales Granitics | <1% |
| | Rowan Sediments | <1% |
| | North Prince of Wales- Kuiu Carbonates | 2% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock and glacial drift. In general, well-drained or moderately well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly drained soils developed on less-sloping areas, such as southeast-facing hills and the areas between hills, and/or on areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

**(c) Vegetation:** Muskeg/forested wetland complexes are interspersed with mixed conifer plant communities on excessively wet sites. 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. Timbered hill slopes are predominantly western hemlock, Sitka spruce, and Alaska-cedar plant communities.

There are approximately 39,607 acres mapped as forest land, of which 20,371 acres or 51 percent are mapped as productive old-growth forest. Of the productive old growth, 9,620 acres or 47 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,335 acres of high-volume, coarse-canopy old growth. There are 516 acres of second-growth forest where timber harvest has occurred in the past.

**(d) Fish Resources:** There are nine Alaska Department of Fish and Game (ADF&G) numbered salmon producing streams within the area. Major fish producing streams in the area include Kadake Creek and Slippery Creek. These provide habitat for pink, chum, and coho salmon; cutthroat and steelhead trout; and Dolly Varden char.

**(e) Wildlife Resources:** Port Camden Bay is a rich ecosystem. Sitka black-tailed deer, moose, beaver, river otter, marten, wolves, and black bear inhabit this roadless area. Black bears are especially

abundant on the north end of Kuiu Island. Other terrestrial mammals include bats, mink, muskrat, ermine, red squirrel, mice, shrews, and voles. There are occasional sightings of fisher and wolverine, but these are considered incidental species at the edge of their range.

Bird species include bald eagles, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, marbled murrelets, osprey, spruce grouse, ptarmigan, sandhill cranes, trumpeter swans, Canada geese, and great blue herons. Red-throated, Pacific, and common loons all occur around Kuiu Island. Several plover, yellowlegs, and sandpiper species occur, mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Sea mammals known to inhabit the waters surrounding Kuiu Island are the Pacific white-sided dolphin, killer whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal. Sea otters occur in the western areas of Sumner Strait off southern Kupreanof Island and on both eastern and western shores of Kuiu Island. They are expanding their range northward into Keku Strait, and are found in Threemile Arm.

Amphibians known to occur on Kuiu Island include rough-skinned newt, western toad, and wood frog. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts. Wood frogs are found in most of the ecosystems found in Southeast Alaska except for marine, estuarine, and riverine ecotypes.

**(5) Management Direction and Current Uses:** The 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, Recreational River, Semi-remote Recreation, Old-growth Habitat, and Remote Recreation.

| LUD | Acres |
|---|---|
| Timber Production | 29,859 |
| Modified Landscape | 2,442 |
| Recreational River | 1,426 |
| Semi-remote Recreation | 3,898 |
| Old-growth Habitat | 2,649 |
| Remote Recreation | 122 |

The majority of the roadless area, approximately 80 percent, was allocated to LUDs that allows development (Timber Production, Modified Landscape). Most of this roadless area, approximately 74 percent, was allocated to the Timber Production LUD. Approximately 6 percent of the roadless area north of Threemile Arm was allocated to the Modified Landscape LUD.

Approximately 20 percent of the roadless area was allocated to non-development LUDs (Recreational River, Semi-remote Recreation, Old-growth Habitat, Remote Recreation). The roadless area contains portions of the Kadake Creek Recreational River LUD, which accounts for approximately 4 percent of the roadless area. The Semi-remote Recreation LUD was assigned to approximately10 percent of the roadless area. It is located in the northwest corner, as well as in the small associated islands. Parts of four old-growth reserves account for 7 percent of the roadless area with the reserves overlapping into adjacent areas. Three of these areas are parts of the medium old-growth habitat reserve in the northeastern portion of Kuiu Island. The other area in the south part of the roadless area is part of a small old-growth habitat reserve. Less than 1 percent of the roadless area was allocated to the Remote Recreation LUD.

The Crane Timber Sale has resulted in timber harvest units and new road construction northwest of Port Camden. The Threemile Timber Sale EIS is currently under analysis and the Draft EIS has been released. This project proposes new roads and timber harvest on the Threemile Arm part of this roadless area. In addition, a low ramp log transfer facility in Threemile Arm may be used. Other timber harvest may be proposed as part of some of the projects listed on the 10-year timber sale schedule. There is a fisheries enhancement project (fish pass) and administrative cabin at Slippery Creek.

Recreation uses include bear and waterfowl hunting; coho, pink, and chum salmon fishing; steelhead and trout fishing; sea kayaking; camping; picnicking; beachcombing; rock hounding; recreation cabin use; and gathering forest products. Both Port Camden and Threemile Arm receive light to moderate recreation use compared to the rest of the Petersburg Ranger District, but use has been increasing. A public recreation cabin is located at the mouth of Kadake Creek. Just outside of the roadless area, two portage trails provide opportunities for canoeists and kayakers to access additional recreation areas. The Threemile Arm portage is 1.25 miles long and connects Port Camden with Threemile Arm. The Bay of Pillars portage is 1 mile long and connects Port Camden with the Bay of Pillars. The Threemile Arm portage is considered difficult and receives very little use. There were seven outfitter/guide permits issued in 2000, including 29 service days for camping, 6 service days for fresh water fishing, 16 service days for remote setting nature tours, and 28 service days for black bear hunting.

**(6) Appearance (Apparent Naturalness):** The roadless area appears natural. Few management activities are visible within Port Camden and from Keku Strait. A public recreation cabin is located at the mouth of Kadake Creek. The western portion is affected by roads and timber harvest which encroach into the roadless area, nearly reaching the saltwater in several places and effectively dividing this part into five portions, with narrow connections near the shoreline. Chum salmon remote release pens are located in Southeast Harbor, just north of Gil Harbor.

**(7) Surroundings (External Influences):** Port Camden bisects this roadless area. National Forest System land borders the area not adjacent to Port Camden. Areas west of, and adjacent to, the Camden Roadless Area are heavily modified by past and present timber harvest activities along Kadake Creek. These developments penetrate into the roadless area, nearly reaching the saltwater in several places. Forest Road 6402, which connects Rowan Bay to Port Camden and Threemile Arm, serves as a major access route for hauling logs and timber harvest, and vehicles can be heard and seen in parts of the roadless area. Occasional marine and air traffic can also be observed. The area to the east is a large unroaded area, extending to, and beyond, the Petersburg Creek/Duncan Salt Chuck Wilderness. To the south, across a narrow roaded area, lies another large unroaded area that includes two wildernesses and several roadless areas.

**(8) Attractions and Features of Special Interest:** The area includes all of Port Camden and Kadake Bay. Attractions in this area include a public recreation cabin at the mouth of Kadake Bay. The presence of good anchorage sites along both shores of Port Camden allows boaters to stay overnight. Portage trails between three major bodies of water allow hikers and kayakers recreation opportunities not found elsewhere on this island. The area contains 11 inventoried recreation places, which cover 5,991 acres, or 15 percent of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The western portion of the roadless area has changed since 1989. Three road networks have been extended into the roadless area, nearly separating that part of the roadless area into five segments. A road has also been extended along the northern shore of Threemile Arm. The roadless area no longer extends to the shore of Threemile Arm. Other changes include adding older harvest areas along the shore that do not have roads, and extending the boundary slightly in the northwest to create a more logical boundary between this roadless area and Keku Roadless Area (239). Several small areas have been excluded along the boundaries formed by ongoing developments 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 eastern portion of the roadless area is essentially unmodified. Roads and timber harvesting have divided the western portion of the area into several segments connected by a narrow stretch of roadless area along the shore. This has adversely affected this portion of the area's

natural integrity. Due to this development, the eastern portion of the roadless area is more suited for wilderness classification than the western portion.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is high opportunity for solitude and primitive recreation within the roadless area, especially the eastern side of the area. Use of floatplanes and motorboats may disrupt visitors for brief periods in all regions of the Camden Roadless Area. Noise from logging trucks on the adjacent road system may be audible during periods of harvest activity, especially on the west side of Port Camden. The general character of the landscape and water features allows visitors to feel remote from the sights and sounds of human activity most of the time.

Access to the interior in the eastern portion of the roadless area involves challenges typical of backcountry travel in Southeast Alaska. However, the extensive road system on the western side of Port Camden allows a hiker relatively easy access into the roadless 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 a variety of recreation opportunities including primitive, semi-primitive and roaded settings. 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) | 14,002 | 35% |
| Semi-Primitive Non-Motorized (SPNM) | 5,158 | 13% |
| Semi-Primitive Motorized (SPM) | 10,634 | 26% |
| Roaded Modified (RM) | 10,601 | 26% |

The area contains 11 inventoried recreation places, which cover 5,991 acres, or 15 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 1 | 1,024 |
| SPNM | 0 | 0 |
| SPM | 6 | 3,924 |
| RM | 6 | 1,043 |

* 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 the mouth of Kadake Creek. There were nine outfitter/guide permits issued in 2000, including 29 service days for camping, 6 for fresh water fishing, 16 for remote setting nature tours, and 28 for black bear hunting. The area along both sides of Port Camden is a popular black bear hunting area. ADF&G records show that 74 black bears were harvested between 1985 and 1994.

**(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 Camden Roadless Area was given a rating of 25 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 23.

This rating reflects the effects related to roads and timber harvesting the western portion of the area. A separate rating was done for the eastern portion of the area and it was given a rating of 26. Similarly, a rating was done for the western portion and received a score of 19.

**(4) Ecologic and Geologic Values:** There are no unique ecologic or geologic values in the roadless area. The roadless area is somewhat unusual in that it occupies both shores of a large bay, but there is no roadless land connection for the two portions of the roadless area.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) lists all VCUs in the area (419, 420, and 421) as primary producers of salmon. It lists only VCU 421, in the northern part of the area surrounding Kadake Bay, as a primary sport fish producer.

This roadless area includes a minor portion of the Kadake Creek drainage. Kadake Creek borders the western boundary of this area and constitutes the largest single drainage on Kuiu Island. It has estimated peak escapements of 36,500 pink and 150 chum, and good runs of coho and steelhead. It supports both commercial and sport fishing. Slippery Creek, on the west side of Port Camden Bay, has been enhanced with a fish ladder, providing access for stocked coho to the upper watershed. Kadake Creek is also a popular sport fishing stream and is regularly used by people staying at the Rowan Bay logging camp, as well as clients of outfitter/guides.

Kadake Creek is the largest producer of salmon on Kuiu Island, producing cutthroat trout; steelhead; Dolly Varden char; and pink, chum, and coho salmon. The ADF&G has identified it as one of 19 "High Quality Watersheds" in Southeast Alaska. Kadake Creek is a popular destination for sport anglers pursuing steelhead. Pink and chum salmon spawning habitat is limited to the lower portions of the watershed where the lower-gradient floodplain channel is present.

**(b) Wildlife Resources:** Port Camden Bay represents a rich ecosystem. It has quality habitat for black bear, fur bearers, and marine mammals. Sea otters are expanding their range northward into Keku Strait, and are found in Threemile Arm. Wolves, moose, and Sitka black-tailed deer also inhabit the area. High quality deer winter habitat can be found along the southern side of Kadake Bay and the west- and south-facing slopes of Port Camden. This area also supports habitat for otter, mink, marten, bald eagle, trumpeter swan, and Canada goose.

The Camden area is readily accessible by boat from Kake. It supports quality waterfowl hunting at the head of the bay, and has a tradition of high subsistence use. The area along both sides of Port Camden is a popular black bear hunting area. Based on data compiled from 1985 to 1994, VCU 420 surrounding Port Camden is listed among the top 25 percent of VCUs for black bear harvest. The other two VCUs, 419 and 421, were listed among 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, including 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. Goshawk nests have been identified in the Kadake Creek area. In addition, 12 sensitive plant species are known or suspected to occur in the Petersburg Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are 505 acres, approximately 1 percent of the roadless area, mapped as low vulnerability karst features. There are no other unique geologic features mapped in this area.

**(5) Scientific and Educational Values:** The highly productive estuarine habitat at the head of Port Camden and Threemile Arm provide a unique combination of wildlife species and habitat. The eastern shore of Port Camden contains fossils of petrified tree species no longer indigenous to Alaska.

**(6) Scenic Values:** Most of the area is natural appearing, with minor intrusions, such as the Forest Service cabin around Kadake Bay and Creek. From Port Camden, the main view route, features contained in the roadless area appear unmodified. Land adjacent to the roadless area to the west displays timber harvest areas and roading, but does not dominate the landscape.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Keku Strait, a tour ship and small boat route; Kadake Creek, recommended for designation as a Recreational River; Port Camden and Kadake Bay for saltwater uses; the Kadake Bay public recreation cabin; and the Kadake Creek dispersed recreation area.

Fifty-one percent is inventoried Variety Class B (possessing landscape diversity that is common for the character type) and 48 percent is inventoried Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, approximately 87 percent, is in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. Approximately 2 percent of the area appears to be untouched by human activity and is in EVC Type II. About 3 percent of the area is in EVC Type IV, where changes in the landscape are easily noticed by the average person and may attract some attention, but it resembles natural patterns. Seven percent is in EVC Type V, where changes in the landscape are obvious to the average person, and appear to be major disturbances. Approximately 1 percent is in EVC VI, where alterations are in glaring contrast to the natural landscape.

**(7) Social, Cultural, and Historical Values:** The Port Camden area is in the traditional territory of the Kake Tlingit. Numerous cultural sites exist in the area, including villages, temporary camps, portage trails, fish traps, petroglyphs, culturally modified trees, gardens, cabins, and fur farms. The area is an important subsistence location, particularly for Kake residents. Hunting, fish, shellfish, seaweed and berry gathering occur regularly. The area along both sides of Port Camden is a popular black bear hunting area. VCUs 420 and 421, surrounding Port Camden and Kadake Bay, respectively, are listed among the VCUs with the highest community use value. VCU 419, close to Threemile Arm, is 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:** Keku Strait forms the northern boundary of this roadless area. The southern boundary is formed by Forest Road 6402 and Threemile Arm. The eastern boundary borders the Rocky Pass Roadless Area, and the western boundary directly adjoins the roaded portion of Kadake Creek. The western portion is partially fragmented by roads and timber harvest and separated from the eastern portion by saltwater and, in the very south, is separated by a roaded area along the shore. It may be logical to manage the eastern portion separately or with the roadless area to the east, as this has higher wilderness attributes.

## 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 area is close to Kake, which is a stop on the Alaska Marine Highway. Recreation potential for the Camden Roadless Area is high, access being the primary limiting factor for increased recreation use. Several potential sites exist for additional public recreation cabins. There is potential for additional outfitter and guide permits. Kayaking and canoeing are increasing in the surrounding waters because of the connection and improvement of portage trails and the availability of a brochure on kayaking/canoeing opportunities in the area.

**(2) Subsistence Uses:** Existing subsistence uses would not be affected by management of the area as wilderness.

**(3) Fish Resources:** The Slippery Creek fish pass has been successful and is making a significant contribution to the area's sport and commercial coho fisheries. Information from the Threemile Timber Harvest DEIS (USDA Forest Service, 2001) indicates that anadromous fish migration in Hiller Creek is blocked approximately 1 mile from the mouth by a natural waterfall. Construction of a fish ladder is planned here.

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

**(5) Timber Resources:** There are approximately 20,371 acres mapped as productive old growth in the roadless area. In addition, there are 516 acres of second growth. Of this, approximately 15,343 acres are characterized as tentatively suitable for harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 5,901 acres or 15 percent of this roadless area are estimated to be suitable for timber production. Approximately 3,075 of the suitable acres are mapped as high-volume old growth; of these acres, 355 are mapped as high-volume, coarse-canopy old growth. A road system is already present in the western portion of the roadless area, which could be extended to the rest of the area west and east of Port Camden.

**(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 recorded mining claims in this area. This area contains an estimated 2,238 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have moderate development potential. The north part of the Kadake River corridor appears to have the highest potential.

**(8) Transportation and Utilities:** There are no transportation or utility corridors in the roadless area. A road system is present along the western portion of the roadless area, which could be extended to the rest of the area west of Port Camden. The road along the southern boundary is planned for extension into the eastern portion of the roadless area.

**(9) Water Availability and Use:** The only domestic water use is for the public recreation cabin near Kadake Creek. 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 505 acres or one percent of the roadless area. There are no other known areas of scientific interest in the roadless area.

**(11) Land Use Authorizations:** Forest Service records show that seven outfitter/guides used this area in 2000 for a total of 6 service days for fresh water fishing, 29 service days for camping, 16 service days for remote setting nature tours, and 28 service days for black bear hunting. Four special use permits have been issued to authorize the storage of crab pots on National Forest System lands near Port Camden.

**(12) Land Status:** The roadless area is entirely National Forest System land. Encumbered lands in this roadless area are located around Kadake Bay.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** There is a high level of interest in the Port Camden area. Previous attempts to build roads and to develop a log transfer facility along the eastern side of Port Camden met with public resistance.

**(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 bill did not include this area. In 2001, HR 2908 did not propose that the roadless area be designated as wilderness. However, it did recommend that most of the roadless area be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

**(c) Public Input During Forest Plan Revision and Appeals:** The Kake Tribal Corporation commented that no logging should be allowed in the Port Camden area. The Narrows Conservation Coalition commented that no LTF development should be allowed. Southeast Alaska Conservation Council and the Alaska Rainforest Campaign recommended LUD II or similar protection. Southeast Alaska Conservation Council felt that the area deserved protection due to its outstanding wildlife, fisheries, hunting, subsistence, recreation and tourism values. The Petersburg Fish and Game Advisory Board wanted the area allocated to the Primitive Recreation LUD or the Old-growth Habitat LUD. They mentioned that it is along an important flyway, it is an important waterfowl winter habitat, and it has a heavy marbled murrelet population. The Sitka Conservation Society also recommended against logging because of the impact on primitive recreation, scenic quality, subsistence, fish, wildlife, and landslide-prone areas. The timber industry felt that any area not specifically set aside by Congress should be put into a timber management LUD. Others wanted to preserve the area for primitive recreation, kayaking, and scenic quality.

**(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review:** There were no specific comments on this roadless area. However, some commented that roads on the island should either be maintained or closed. Many thought that there should be fewer roads because roads are the most destructive part of a timber harvest and harm many resources. Others wanted more roads to aid in subsistence harvest or for economic development reasons.

**(e) Public Input Expressed for Project-level EISs and Other Input:** Public input was received on the Crane and Rowan Mountain Timber Sale EIS. The Southeast Alaska Conservation Council stated that no decision should be made until the roadless issue is decided at the national level. The City of Kake commented that subsistence use would be adversely affected by timber harvest, including the cultural and spiritual value of participating in traditional subsistence harvests in the old-growth forests used by the ancestors of the Tlingit residents of Kake for countless generations. Logging and road building in these sacred places permanently and irreparably degrades an important cultural experience. They stated that courts have recognized that ANILCA protects this value. This position was supported by the Southeast Alaska Conservation Council, the Earthjustice Legal Defense Fund, and other commenters. The Alaska Forest Association supported roads and timber harvest.

Comments were also received on the Threemile EIS. The U.S. Fish and Wildlife Service felt that that no decision should be made until the roadless issue is decided at the national level. The Sitka Conservation Society, the Cascadia Wildlands Project, and others supported this position. The Sitka Conservation Society also stated that the Camden Roadless Area was an important subsistence area and is important for solitude. They wanted it managed to preserve its wilderness characteristics. They also stated that the isthmus between Port Camden, Bay of Pillars, and Threemile Arm has many springs that add diversity. The Alaska Rainforest Campaign felt that the area should be protected under the National Roadless Area Conservation Policy. The Southeast Alaska Conservation Council wanted roadless areas properly evaluated prior to any road building or harvest. They also stated that the area is important to the residents of Kake for subsistence uses. Others stated that the area is valuable habitat for waterfowl, black bears, furbearers, marine mammals, and bald eagles. They added that subsistence use would be harmed by roads and timber harvest, including the cultural and spiritual value of participating in traditional subsistence harvests in old-growth forests used by the Tlingit people. Other comments supported timber harvest in this area.

**(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 that among the remaining, undeveloped areas left on Kuiu Island, three areas offer outstanding fish and wildlife habitat that should be protected. These include Bay of Pillars, Camden, and East Kuiu. Protection of this area, particularly in combination with the Rocky Pass (#243) Roadless Area, would conserve valuable remaining undisturbed, forested habitats on the 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

ADF&G rated the Camden roadless area as the third highest priority for protection in the Stikine Area. 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 Petersburg said they were opposed to designation of this area as wilderness because of the potential long-term economic effects on the city.

The Organized Village of Kake passed a resolution requesting that "customary and traditional areas such as … Port Camden (VCU 420)… be recommended for long-term protection.

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 242 for permanent protection as LUD II. SEACC recommended the remaining unlogged portions of northern Kuiu Island should be protected by LUD II designation.

A number of individuals identified East Port Camden as an area that needed protection. Some individuals recommended the entire area for permanent protection as wilderness.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Rocky Pass Roadless Area to the east directly adjoins the Camden Roadless Area. The Keku Roadless Area is connected to this roadless area by a narrow unroaded area along the shore. The East Kuiu Roadless Area is to the south and the Tebenkof Bay Wilderness is to the southwest, separated by a logging road and several harvest units. These areas receive low use compared to other areas on the Petersburg Ranger District.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 105 | 115 |
| Ketchikan (Pop. 14,070) | 120 | 145 |
| Wrangell (Pop. 2,308) | 60 | 65 |
| Petersburg (Pop. 3,324) | 35 | 85 |

Kake and Petersburg are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Camden Roadless Area is located on northeast Kuiu Island, southeast of Keku Strait. It is divided into two sections by Port Camden, a large bay. Camden Roadless Area is characterized by gently rolling hills that are typically short, extremely broken and benched. Steeper slopes are forested, but muskegs and scrub timber are very common on gently sloping to moderately steep hills.

The roadless area is natural appearing, but the western side of Port Camden is influenced by developments on adjacent lands. The natural integrity and apparent naturalness of the area is high. The natural integrity of the portion east of Port Camden is outstanding and the apparent naturalness is very high when rated separately. The western area has moderate natural integrity and apparent naturalness when rated separately. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding in the roadless area.

None of the roadless area landscape is considered distinctive for the character type from a scenery perspective. The area has good cultural, historic, and recreational values. There are no other ecologic, geologic, or scientific features of significance in the area.

The roadless area includes about 9,620 acres of high-volume, old-growth forest. Of these acres, 1,335 are mapped as high-volume, coarse-canopy old growth.

The Camden Roadless Area is classified as being in the Kuiu Island Biogeographic Province and makes about 8 percent of the province. It is one of eight inventoried roadless areas found within the province that collectively make up about 53 percent of the province. The Tebenkof Bay and the Kuiu Wildernesses are located in this province and make up about 26 percent of the province. The province also includes the Sumner, Conclusion, and associated islands LUD II areas, which make up about 1 percent of the province.

The Camden Roadless Area lies within two ecological sections; it represents 4 percent of the Kupreanof Lowlands Ecological Section and 0.1 percent of the Kuiu-Prince of Wales Fjordlands 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. 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 (89 percent) of the roadless area is in the Sumner Strait Volcanics Ecological Subsection. This portion of the roadless area represents 10 percent of the entire ecological subsection, minor portions of which are protected by existing wilderness and LUD II (0.1 percent and 1 percent, respectively) and by other existing non-development LUDs (32 percent). Nine percent of the roadless area is in the Kake Volcanics Ecological Subsection; this portion of the roadless area represents 3 percent of the entire ecological subsection. Approximately 23 percent of the Kake Volcanics Ecological Subsection is protected by other existing non-development LUDs. An additional 2 percent of the roadless area is in the North Prince of Wales-Kuiu Carbonates Ecological Subsection; this portion of the roadless area represents 0.4 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 Rowan Sediments and Kuiu-Prince of Wales Granitics Ecological Subsections each cover less than 1 percent of the roadless area, and the roadless area makes up approximately 0.1 percent of each subsection. Twenty-seven percent of the Rowan Sediments Ecological Subsection is in existing wilderness and 27 percent is protected by existing non-development LUDs. Nineteen percent of the Kuiu-Prince of Wales Granitics Ecological Subsection is protected in existing wilderness, 23 percent in existing LUD II, and 36 percent in existing non-development LUDs.

The Camden Roadless Area was rated 23 out of a possible 28 points under the 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. The portion of the roadless area east of Port Camden was rated separately and scored 26, and the western portion rated 19.

There is both strong local and national support for managing the area in an unroaded condition, as well as support for designation of at least parts of the roadless area to wilderness. Designation would create a wilderness that has good cultural, historic and recreational values. The area has a large amount of old growth that is in contrast with the developed areas to the west where intensive timber management has occurred. Designation of the area also would add Congressional protection to about 10 percent of Sumner Strait Volcanics Ecological Subsection and 3 percent of the Kake Volcanics Ecological Subsection that have about 1 percent or less in wilderness or LUD II. The roadless area could also be designated as part of a larger wilderness that stretched east across Kupreanof Island and connects to the Petersburg Creek-Duncan Canal Wilderness. 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 Camden Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, or 4 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. The land in the development LUDs provides an estimated 5,901 acres that are suitable for timber production (4 percent of the suitable acres on the Petersburg Ranger District). Approximately 355 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains an estimated 2,238 acres of undiscovered locatable mineral resources; all of the acres are considered to have moderate development potential. The timber sales, 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 3, a 24,130-acre portion of the area in Remote Recreation, Old-growth Habitat, Semi-remote Recreation, Modified Landscape, and Timber Production LUDs would be converted to Recommended Wilderness. The timber sales, recreation, minerals, and special use programs would continue outside the Recommended Wilderness, but could be restricted within. No timber harvest would be allowed in the Recommended Wilderness area. Lands suitable for timber production would be reduced to approximately 1,405 acres. The values associated with the natural settings of the eastern portion of the roadless area, including cultural, historic, old growth, and most of the recreation values, would be provided long-term protection if designated wilderness.

Under Alternative 5 or 7, a 17,195-acre portion of the Remote Recreation, Old-growth Habitat, Semi-remote Recreation, and Timber Production LUDs would be converted to Recommended Wilderness. The timber sales, recreation, minerals, and special use programs would continue outside the Recommended Wilderness, but could be restricted within. No timber harvest would be allowed in the Recommended Wilderness area. Lands suitable for timber production would be reduced to approximately 2,995 acres. The values associated with the natural settings of the northern part of the eastern portion of the roadless area, including cultural, historic, old growth, and most of the recreation values, would be provided long-term protection if designated wilderness.

Under Alternative 6, the entire roadless area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special uses programs would continue. No timber harvest would be allowed. Designation of the area also would add Congressional protection to about 10 percent of Sumner Strait Volcanics Ecological Subsection and 3 percent of the Kake Volcanics Ecological Subsection that have about 1 percent or less in wilderness or LUD II. The values associated with the natural settings of the roadless area, including cultural, historic, old growth, and most of the 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. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area also would add Congressional protection to about 10 percent of Sumner Strait Volcanics Ecological Subsection and 3 percent of the Kake Volcanics Ecological Subsection that have about 1 percent or less in wilderness or LUD II. The values associated with the natural settings of the roadless area, including cultural, historic, old growth, and most of the recreation values, would be provided long-term protection if designated wilderness.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 242 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | 24,130 | | 17,195 | | 17,195 | 40,395 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | 122 | 122 | | 122 | 33 | | 33 | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | 2,649 | 2,649 | 2045 | 2,649 | 2,220 | | 2,220 | |
| Semi-remote Recreation | 3,898 | 3,898 | 3694 | 3,898 | 3,694 | | 3,694 | |
| Recommended LUD II | | | | | | 40,395 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | 1,426 | 1,426 | 1426 | 1,426 | 1,426 | | 1,426 | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | 2,442 | 2,442 | 104 | 2,442 | 2,439 | | 2,439 | |
| Timber Production | 29,859 | 29,859 | 8996 | 29,859 | 13,389 | | 13,389 | |
| **TOTAL** | **40,395** | **40,395** | **40395** | **40,395** | **40,395** | **40,395** | **40,395** | **40,395** |
| Suitable Timber Lands | 5,901 | 5,901 | 1,405 | 5,901 | 2,995 | 0 | 2,995 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Rocky Pass (243)

**ACRES (NFS):** 79,103

**BIOGEOGRAPHIC PROVINCE:** Kuiu Island and Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Kupreanof Lowlands

**2003 WILDERNESS ATTRIBUTE RATING:** 26

### I. Overview and Description

**(1) Location and Access:** The Rocky Pass Roadless Area includes many small islands and is divided into two main portions separated by saltwater. The western portion lies on the eastern edge of Kuiu Island and the eastern portion lies on the western edge of Kupreanof Island, just south of Kake. Rocky Pass, which is a part of Keku Strait, divides the roadless area into the two parts.

The area is approximately 25 miles west of Petersburg, which is served by the Alaska Marine Highway and daily jet service. It is accessed primarily from saltwater via boat or by floatplane. A number of good anchorages are located along Rocky Pass. There are no sites suitable for landing wheeled aircraft. Several Forest Roads adjoin Rocky Pass Roadless Area near the head of Big John Bay, providing road access to the northeastern portion of the area from Kake, approximately 15 road miles away. Access to the interior is by foot or helicopter. The roadless area also includes Horseshoe, Hound, Entrance, Summit, and Eagle Islands and numerous small islands and islets within Rocky Pass.

**(2) History:** The area lies within the traditional territory of the Kake Tlingit. Cultural resources are numerous along the shoreline, representing a wide variety of archaeological site types and use. These include historic period cabins, fur farms, cemeteries, gardens and culturally modified trees that may represent prehistoric use as well. Prehistoric period archaeological sites include fish traps, villages, and camps. The Kuiu Island portion of this roadless area was part of the Alaska Pulp Corporation long-term timber sale area from 1960 until the late 1990s, although no timber harvest or road building occurred in this area.

A logging camp was developed at nearby Rowan Bay (on the west side of Kuiu Island), and is still used during active timber harvest operations. Road development and timber harvesting have occurred along the southwestern edge of the roadless area following the northern shore of Threemile Arm (on Kuiu Island), and along the northeastern edge in the Hamilton and Big John Creek drainages (on Kupreanof Island). A minor amount of beach logging has occurred within the area.

**(3) Geography and Topography:** Bedrock lithology is dominated by extrusive igneous rocks. Rock types are primarily rhyolite, rhyodiorite, basalt and other mafic extrusive rocks that have been extremely altered and brecciated in many areas. Volcanic conglomerate and volcaniclastic graywackes are scattered throughout the area. Volcaniclastic deposits, such as mafic tuff and tuff breccia; volcanic flows; and flow breccias occur within this area, notably the area between Crane Creek and Kadake Bay on the west side of Port Camden. This landscape is much younger than the rest of Kuiu Island, as these rocks are of Pleistocene age (less than a million years old). The older volcanic rocks of Triassic age (180 to 225 million years ago) on the Cornwallis Peninsula northwest of Port Camden are included in this geophysical area because of similarity of bedrock type and landform physiography.

Landforms within this area are characterized by rolling to moderately steep hills, typically less than 1,500 feet in elevation. Slopes are generally short and extremely broken or benched. The area is separated north and south by Rocky Pass, a navigable channel separating Kuiu and Kupreanof Islands. The narrow and often shallow channel of Rocky Pass is distinguished by numerous small islands and rock outcroppings. Islands and islets account for 2,023 acres in the roadless area, of which, five islands are over 50 acres. The area contains 245 miles of saltwater shoreline. Stream density is relatively low (2.6 miles/1,000 acres). In areas of volcaniclastic bedrock, actively

eroding gullies (V-notches) are prominent features and contribute a large amount of bedload sediments. This roadless area has 7 acres of alpine and 4 acres of rock. There are no ice or snow features mapped in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Kuiu Island and Kupreanof/Mitkof Islands Biogeographic Provinces. The Kuiu Island Province is deeply dissected, creating several prominent peninsulas. The topography is gentle compared to neighboring Baranof Island or the mainland. The eastern portion of the Kuiu province (which includes the western portion of the roadless area) is not subject to the severe windstorms, which occur on the western side of the province. The Kupreanof/Mitkof Islands Province is generally characterized by rolling, subdued topography and extensive muskeg areas, but may have localized, rugged terrain. This roadless area is noted for the diversity of shoreline and associated groups of small islands.

Ecological Section/Subsection. The Rocky Pass Roadless Area is contained entirely within the Kupreanof Lowlands Ecological Section (M247G), represented by two ecological subsections (see table below). The Sumner Strait Volcanics Ecological Subsection represents the majority, 71 percent, of the Rocky Pass Roadless Area. Water-resistant volcanic flows of relatively recent origin arise from lowland glacial deposits. The interplay of volcanic and glacial forces have left a landscape of shallow organic soils on long, gentle slopes and mineral soils on short, steep slopes. Productive hemlock, Alaska yellow cedar, and spruce forests are found on the steep slopes. The remainder of the Rocky Pass Roadless Area, 29 percent, lies within the Kake Volcanics Ecological Subsection, which contains gently rolling hills of glacially reduced sedimentary and volcanic rock, usually below 1,000 feet elevation. Productive hemlock and spruce forests are found on the slopes (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kupreanof Lowlands | Sumner Strait Volcanics | 71% |
| | Kake Volcanics | 29% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock and glacial drift. In general, well- or moderately well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

**(c) Vegetation:** Muskeg/forest wetland timber complexes on excessively wet areas are interspersed with mixed conifer plant communities on better-drained sites and are believed to cover approximately 50 percent of this geophysical area. Muskegs are mapped as covering approximately 2,056 acres; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Timbered hill slopes are dominated by western hemlock, Sitka spruce, and Alaska-cedar plant communities. Subalpine ecosystems occupy about 5 percent of this geographic area.

There are approximately 75,491 acres mapped as forestland, of which 39,467 acres or 52 percent are mapped as productive old-growth forest. Of the productive old growth, 13,587 acres or 34 percent are mapped as high-volume old-growth forest. The productive old growth includes about 2,739 acres of high-volume, coarse-canopy old growth. There are 185 acres of second-growth forest where beach timber harvest has occurred in the past.

**(d) Fish Resources:** Twenty-five Alaska Department of Fish and Game (ADF&G) numbered salmon-producing streams are present. Most of the streams on the west side of the roadless area are entirely within the roadless area, while many of the streams on the east side have upper watersheds outside of the area. The largest salmon producers are Big John Creek, Irish Creek, and Tunehean Creek, all on

Kupreanof Island. This area supports runs of steelhead and cutthroat trout; Dolly Varden char; and pink, chum, and coho salmon.

**(e) Wildlife Resources:** Sitka black-tailed deer, moose, beaver, river otter, marten, wolves, and black bear inhabit this roadless area. Black bears are especially abundant on Kuiu Island. Other terrestrial mammals include bats, mink, muskrat, ermine, red squirrel, mice, shrews, and voles. There are occasional sightings of fisher and wolverine, but these are considered incidental species at the edge of their range. One mountain lion, another incidental species, has been trapped on the south end of Kupreanof Island. This species may be migrating into Southeast Alaska from Canada along the major rivers.

Eagle nest-trees dot the shores from Big John Bay south through Rocky Pass. Large flocks of ducks and geese use this area during their fall migrations. Three northern goshawk nests were found in the Big John Creek drainage. Other bird species include red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, marbled murrelets, osprey, spruce grouse, ptarmigan, sandhill cranes, trumpeter swans, and great blue herons. Red-throated, Pacific, and common loon all occur around Kuiu and Kupreanof Island. Several plover, yellowlegs, and sandpiper species occur mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Sea mammals known to inhabit the waters surrounding Kuiu Island are the Pacific white-sided dolphin, killer whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal. Sea otters occur but are only locally abundant in the western areas of Sumner Strait off southern Kupreanof and on both eastern and western shores of Kuiu Island. They are expanding their range northward into Keku Strait.

Amphibians known to occur on Kuiu or Kupreanof Island include rough-skinned newt, western toad, and wood frog. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock-spruce forests and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests and in clearcuts. Wood frogs are found in most of the ecosystems found in Southeast Alaska except for marine, estuarine and riverine.

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

| LUD | Acres |
|---|---|
| Modified Landscape | 4,219 |
| Timber Production | 515 |
| Scenic Viewshed | 409 |
| Remote Recreation | 41,670 |
| Semi-remote Recreation | 22,577 |
| Old-growth Habitat | 9,714 |

Approximately 6 percent of the roadless area was allocated to development LUDs (Modified Landscape, Timber Production, Scenic Viewshed), which allow timber harvest and road building. Pockets along the border with Roadless Area 242 to the west on Kuiu Island were allocated to the Modified Landscape LUD and account for approximately 5 percent of the roadless area. Approximately 1 percent of the roadless area, on Kuiu Island, was allocated to the Timber Production LUD. Less than 1 percent of the roadless area, on Kupreanof Island, was allocated to the Scenic Viewshed LUD.

The majority of the roadless area, approximately 94 percent, was allocated to non-development LUDs (Remote Recreation, Semi-remote Recreation, Old-growth Habitat). Along Rocky Pass, including most of the islands, approximately 53 percent of the roadless area was allocated to the Remote Recreation LUD. At the northern end of the area (including the northern and other islands), approximately 29 percent of the roadless area was allocated to the Semi-remote Recreation LUD. Approximately 12 percent of the roadless area was allocated to the Old-growth Habitat LUD, located primarily in the southeast.

Recreation uses include black bear, moose, deer, and waterfowl hunting; coho salmon, pink salmon, steelhead, and trout fishing; rock hounding; sea kayaking; camping; hiking; recreation cabin use; viewing scenery; and motorized boating. A fish pass, two public recreation cabins, one short trail, and an offshore oyster farm are the only developments in the area. Sport fishing takes place in Tunehean Creek. The protected waters (from weather) of Rocky Pass are popular for sea kayaking, with the Alaska Marine Highway ferry terminal at Kake providing access. Irish and Keku Creeks are popular among recreationists and subsistence users. There were eight outfitter/guide permits issued in 2000, which produced 172 service days. There is State of Alaska land on High Island within Rocky Pass. There is Sealaska Corporation land at Dakaneek Bay. The Coast Guard maintains navigation aids for smaller vessels in Rocky Pass. At one time it was proposed that a road be built across Rocky Pass waterway at High Island, which would then tie together Kuiu and Kupreanof Islands. This is still a possibility, but not likely in the near future.

The Threemile Timber Harvest FEIS and ROD are scheduled for publication in January 2002. Timber harvest under this FEIS would occur on Kuiu Island on land adjacent to Threemile Arm.

**(6) Appearance (Apparent Naturalness):** Most of the area appears unmodified when viewed from the major travel routes (Rocky Pass). The area appears natural when viewed from Rocky Pass, Big John Bay, Keku Strait, Hamilton Bay, and Davidson Bay.

**(7) Surroundings (External Influences):** The Rocky Pass Roadless Area forms a link to other unroaded areas on both Kupreanof Island and Kuiu Island because it occupies land on both islands. A road from Kake and timber harvest areas lie along the northeastern boundary of this roadless area and a smaller area with roads and harvest units lies to the southwest. Light marine and air traffic pass through or over the area. Roadless Area 242 lies to the west and Roadless Area 214 lies to the east.

**(8) Attractions and Features of Special Interest:** This area is prized for its geologic diversity, and is a prime area for rock hounds to visit. Big John Bay and Devil's Elbow recreation cabins are located within this roadless area. The area contains 11 inventoried recreation places, which cover 11,746 acres, or 15 percent of the roadless area. The unmodified nature of the waterway with its diversity of small islands makes this area attractive for explorers with small boats and kayaks. There is one short developed trail (Big John Bay) in the area. Bear hunting and sport fishing occur throughout the Rocky Pass area. There were 172 service days of outfitter/guide use of the area in 2000. One of the unique features of the Rocky Pass area is the shallowness of the water. It is only navigable by larger boats during high tides.

**(9) Changes in Roadless Area Boundaries between 1989 and 2003:** There have been minor changes to the boundaries. These include adding older harvest units along the shore and along Tunehean Creek that are not associated with roads, and dropping a relatively small area in the southwest that now contains a road and several harvest units.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is mostly unmodified, except for the remnants of historic fur farms, trapping cabins, temporary camps, a fish pass, two public recreation cabins, one short trail, and an offshore oyster farm. Even with these minor modifications, the landscape is dominated by a natural appearance. Based on appearance, the roadless area is suitable for wilderness designation. The roadless area has an unusual aspect—it is bisected by a saltwater travelway, Rocky Pass, which is part of Keku Strait.

**(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 Rocky Pass area. Use of floatplanes and powerboats may disrupt visitors for brief periods. Present recreation use levels are moderate. Persons camped along the shore are generally unlikely to encounter another person, but might see or be visible to the occasional recreational boater.

A high degree of challenge and skill is needed to navigate through the scenic array of rocks and islands in Rocky Pass. Travel on land is relatively easy compared to many other unroaded areas in Southeast Alaska because of the relatively gentle terrain. 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 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) | 38,415 | 49% |
| Semi-Primitive Non-Motorized (SPNM) | 13,046 | 16% |
| Semi-Primitive Motorized (SPM) | 26,469 | 33% |
| Roaded Modified (RM) | 1,173 | 1% |

The area contains 11 inventoried recreation places, which cover 11,746 acres, or 15 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPM | 0 | 0 |
| RN | 9 | 11,597 |
| RM | 4 | 149 |

* 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 public recreation cabins and one short, developed trail in the Rocky Pass 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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Rocky Pass Roadless Area was given a rating of 26 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 also given a rating of 26.

**(4) Ecologic and Geologic Values:**

**(a) Fish Resources:** All VCUs (419, 425, 427, and 428) have been listed as primary producers of salmon by the Tongass Fish and Wildlife Resource Assessment. Only VCU 425 in the north along Keky Strait is listed as a primary sport fish producer (ADF&G, 1998).

Twenty-five ADF&G numbered salmon producing streams are present. Many of the streams have upper watersheds outside of the area. The largest salmon producers are Big John Creek, Irish Creek, Keku Creek, and Tunehean Creek. Big John Creek is blocked by falls approximately 1.5 miles upstream from the river's mouth. The lower reaches contain coho, chum, and pink salmon, steelhead and cutthroat trout. Modification of the falls on Big John Creek is a potential fisheries enhancement project. ADF&G lists Tunehean Creek as significant overwintering habitat for Dolly Varden and a significant coho salmon and steelhead stream. Irish and Keku Creeks have high commercial value for coho salmon and sport value for steelhead. Keku Creek drainage is an important rearing area for juvenile coho salmon. Wire tag harvest data indicate that the additional habitat on Irish/Keku Creek alone contributed 32,000 coho in 1991 and 13,000 fish in 1992 to the commercial catch.

**(b) Wildlife Resources:** There are key wildlife east-west movement corridors along the Big John Creek drainage and along the Keku Creek drainage that lead from Rocky Pass to Duncan Canal. Sitka black-tailed deer, moose, beaver, river otter, marten, wolves, and black bear inhabit this roadless area. Black bears are especially abundant on Kuiu Island and bear hunting is popular along the shore and road systems. Based on harvest data compiled from 1985 to 1995, VCUs 419, 427, and 428 along Keku Strait, Rocky Pass, and Threemile Arm, respectively, were ranked in the second 25 percent of brown bear harvest areas on the Tongass. One mountain lion, another incidental species, has been trapped on the south end of Kupreanof Island. This species may be migrating into Southeast Alaska from Canada along the major rivers.

Eagle nest trees dot the shores from Big John Bay south through Rocky Pass. Large flocks of ducks and geese use this area during their fall migrations. Several seal haulouts are located on small islands within the Rocky Pass area. Sea otters occur but are only locally abundant in the western areas of Sumner Strait off southern Kupreanof and on both eastern and western shores of Kuiu Island. They are expanding their range northward into Keku Strait.

**(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. Three goshawk nests were found in the Big John Creek drainage. In addition, 12 sensitive plant species are known or suspected to occur in the Petersburg 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 Kuiu portion of Rocky Pass is in the Keku Volcanic Plateaus geophysical area. This geophysical area makes up much of the east side of Kuiu Island from No-Name Bay to Kadake Bay, including the entire Keku peninsula. Landforms are typically prominently benched hills and lava plateaus typical of volcanic terrain. Many volcanic landform features, such as volcanic cones and lahars, have likely been destroyed by glaciation since the entire area has been glaciated after volcanism ceased. The present landscape is largely the result of glacially eroded alternating strata of volcanic flows that dip in a southeast direction. Southeast-facing slopes are long and relatively gentle, while northwest facing slopes are typically steep and stair-stepped with numerous cliffs. Most hills are less than 1,500 feet in elevation.

**(5) Scientific and Educational Values:** The roadless area offers the opportunity to study agates, geodes, and other semi-precious stones, as well as petrified wood and fossils.

**(6) Scenic Values:** The majority of the area is unmodified and appears natural. No modification can be seen from Rocky Pass. Because of the topography, the roads built to the north of the roadless area probably cannot be seen through the trees when traveling in Big John Bay. The natural setting dominates the landscape when traveling along Keku Strait and in Davidson Bay. This also is the case when looking south in Hamilton Bay.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Keku Strait, a tour ship and small boat route; Rocky Pass, a small boat route; Hamilton Bay, a saltwater use area and dispersed recreation area; Big John Bay public recreation cabin; Big John Bay Hiking Trail #465; and Hamilton Creek Hiking Trail #463.

Nine percent of this roadless area is inventoried Variety Class A (possessing landscape diversity that is unique for the character type). Twenty-three percent is inventoried Variety Class B (possessing landscape diversity that is common for the character type) and approximately 67 percent is inventoried Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, approximately 94 percent, is in Existing Visual Condition EVC Type I, where only ecological change has occurred. About 2 percent of the roadless area appears to be untouched by human activity and is in EVC Type II. Two percent of the area is in EVC Type IV, where changes in the landscape are easily noticed by the average person and may attract some attention, and appear to resemble natural patterns. About 2 percent is 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:** The area lies within the traditional territory of the Kake Tlingit. Cultural resources are numerous along the shoreline, representing a wide variety of archaeological site types and use. These include historic period cabins, fur farms, cemeteries, gardens and culturally modified trees that may represent prehistoric use as well. Road development and timber harvesting have occurred along the southwestern edge of the roadless area following the northern shore of Threemile Arm (on Kuiu Island), and along the northeastern edge in the Hamilton and Big John Creek drainages. A minor amount of beach logging has occurred within the area. There are two public recreation cabins and two developed trails in the Rocky Pass Roadless Area. Rocky Pass receives moderate recreation use. There were eight outfitter/guide permits issued in 2000, the activities included camping (29 service days), remote setting nature tours (9 service days), black bear hunting (132 service days), and wolf hunting (2 service days). Subsistence use in the area includes hunting, fishing, and shellfish and seaweed harvest. Only VCU 425 in the north of the area along Keku Strait was rated among the VCUs with the highest community use values. All VCUs (includes VCUs 419, 427, and 428) except VCU 425 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 roadless area boundaries are well-defined by topography on the west, except for the southwest corner. On the east, the area is less well defined, especially on the northeast. It borders roadless areas on the east and west and opens to the wider portion of Keku Strait to the south and north. The southwest corner of Roadless Area 214 along Keku Strait could easily be managed with the Rocky Pass Roadless Area. Forest roads currently approach the northern boundary from Kake. Forest Road 6434, which connects Rowan Bay through the isthmus to Port Camden and Threemile Arm, is planned to be extended to within 0.5 mile of the southern end of Rocky Pass. The area is part of a larger roadless area to the east and could be managed separately or as part of a larger wilderness. Adjusting the area to provide boundaries that are better defined by topography, especially in the northeast and southwest, might help provide a more easily managed wilderness area.

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

**(1) Recreation, Including Tourism Potential:** Recreation potential for Rocky Pass is high, as there are opportunities for additional recreation cabins, trails, and outfitter and guide use. Tourism has been increasing in Southeast Alaska and is expected to continue to grow. There were eight outfitter/guide permits issued for this area in 2000. There is good potential to increase use.

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

**(3) Fish Resources:** Three major fish enhancement projects, including two fish ladders, have been constructed on the Irish and Keku Creek system. The Irish Creek vertical-slot fish ladder was completed in 1984, and is considered very successful. There is a proposed enhancement project on Tunehean Creek outside the roadless area

to install large woody debris to improve fish habitat in areas where timber has been harvested. Falls modification for Big John Creek is a potential enhancement project.

**(4) Wildlife Resources:** No wildlife enhancement projects have been identified for this area.

**(5) Timber Resources:** There are approximately 39,467 acres inventoried as productive old-growth forest and 185 as second growth in the roadless area. Of this, approximately 27,981 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), 863 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, 40 are mapped as high-volume, coarse-canopy old growth.

Timber sales may result in increased roading on both islands, which may provide additional access to the Rocky Pass Roadless Area. The Threemile Timber Harvest FEIS (Kuiu Island) and Record of Decision are scheduled for publication in January 2002. Continued development of the road system south of Kake would parallel Rocky Pass and could make future management of the area in primitive settings more challenging. However, most of the area in not allocated to LUDs that allow roads.

**(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:** According to the Threemile DEIS (USDA Forest Service, 2001), there are no known mineral occurrences of commercial value within this area. BLM indicates Tunehean Creek has potential for mineral extraction of copper and molybdenum. No existing claims or patented claims exist.

This roadless area contains an estimated 6,439 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). Approximately 1,319 of these acres are considered to have moderate potential for development.

**(8) Transportation and Utilities:** No transportation or utility corridors are proposed for this roadless area. A potential powerline corridor would cross near or along the northeast corner of the area.

**(9) Water Availability and Use:** The two recreation cabins create water demand for the Rocky Pass Roadless Area. There are no existing or planned hydroelectric or domestic water projects.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** Special Use Permit authorizations in effect within this roadless area include maintenance of navigational aids at Salt Point for the U.S. Coast Guard, crabpot storage for several private individuals at Kakeneek Bay and Big John Bay, and storage of items associated with oyster farming at Stedman Cove.

**(12) Land Status:** The roadless area is entirely National Forest System land. Encumbered lands within the roadless area are located around Point Hamilton and Hound Island. High Island has been conveyed to the State of Alaska (approximately 605 acres), and is in the center of the roadless area, in Rocky Pass, but it is not part of the roadless area.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Residents of Kake have a traditional cultural interest in the Rocky Pass area. Recreationists from Wrangell and Petersburg use 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. The bill did not include this area. In 2001, HR 2908 did not propose that the roadless area be designated as wilderness. However, it did recommend that most of the roadless area be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

**(c) Public Input During Forest Plan Revision and Appeals:** In 1996, the Southeast Alaska Conservation Council recommended managing the area to preserve its integrity. They felt that the area merited special protection for its outstanding wildlife, fish, hunting, subsistence, recreation, and tourism values. However, timber industry organizations felt that areas not allocated to wilderness or LUD II should be allocated to Timber Management LUD.

Some comments suggested managing the area for wilderness and others as an Old-growth Habitat LUD. One commenter wanted the area managed as a Remote Recreation LUD. There were also general comments on Kupreanof Island. Some commenters wanted all unroaded areas developed and some wanted all unroaded areas protected. Some favored designating all unroaded lands as wilderness and some wanted them managed as roadless areas or for remote recreation.

**(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review:** There were no specific comments on this roadless area. However, some commented that roads should either be maintained or closed. Many thought that there should be fewer roads because roads are the most destructive part of timber harvest. Some wanted to see helicopters used for timber harvest rather than building more roads.

**(e) Public Input Expressed for Project-level EISs and Other Input:** Public input received during the Kupreanof Island Analysis ranged from favoring logging to favoring protecting the area from logging and road building. Commenters specifically recommended protecting Rocky Pass, Hamilton Bay, Big John Creek, and Irish Creek. Some comments suggested slowing down the rate of development. Others wanted an emphasis on value-added-uses for timber harvested from the National Forest. Some wanted the Forest Service to build more developed recreation facilities, such as trails and tent platforms. A number of people doubted that additional roads would be beneficial to recreation. They felt that existing primitive and roadless areas should be maintained. Many people stated that the scenery was important for tourism while another said that scenery was not important and logging should not be reduced because of scenery concerns.

**(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 communicated that protection of this area, particularly in combination with the Camden (#242) and South Kupreanof (#214) Roadless Area, would conserve valuable remaining undisturbed forested habitats on the island.

The city of Petersburg said they were opposed to designation of this area as wilderness because of the potential long-term economic effects 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.

The city of Kupreanof recommends Rocky Pass for designation as wilderness.

The Organized Village of Kake passed a resolution requesting that “customary and traditional areas such as … Rocky Pass (VCU 428)… be recommended for long-term protection.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 243 for permanent protection as LUD II. SEACC recommended the Rocky Pass roadless area for LUD II designation.

A number of individual commenters identified southeast Rocky Pass as an area that needed protection. This area is of special concern to residents of Point Baker.

**(2) Nearby Roadless and Wilderness Areas and Uses:** This area adjoins the Port Camden Roadless Area (242) to the west and South Kupreanof Roadless Area (214) to the east. Other roadless areas are contiguous to these. Use in all of these areas is generally light.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 100 | 110 |
| Ketchikan (Pop. 14,070) | 110 | 145 |
| Wrangell (Pop. 2,308) | 50 | 60 |
| Petersburg (Pop. 3,324) | 25 | 60 |

Kake and Petersburg are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Rocky Pass Roadless Area includes many small islands and is divided into two main portions separated by saltwater. The western portion lies on the eastern edge of Kuiu Island and the eastern portion lies on the western edge of Kupreanof Island, just south of Kake. Rocky Pass, which is a part of Keku Strait, divides the roadless area into the two parts. Rocky Pass Roadless Area lies on both sides of Rocky Pass. Landforms within this area are characterized by rolling to moderately steep hills, typically less than 1,500 feet in elevation. Hill slopes are short and extremely broken or benched. Unlike most roadless areas, which are separated by waterways, this roadless area encompasses a waterway. The narrow and often shallow waterway has scores of small islands and rocks. In addition, the surrounding landform is an important backdrop in this setting. It is east of the Camden Roadless Area on Kuiu Island, and west of the South Kupreanof Roadless Area on Kupreanof Island.

The area is natural appearing. The natural integrity is very high and the apparent naturalness is outstanding. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

Approximately 9 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The area has very high cultural, historic, and recreational values. This area is prized for its geologic diversity, and is a prime area for rock hounds to visit. The Kuiu portion of Rocky Pass is in the Keku Volcanic Plateaus geophysical area.

The roadless area includes about 13,587 acres of high-volume, old-growth forest. Of these acres, 2,739 are mapped as high-volume, coarse-canopy old growth.

Approximately 39 percent of the Rocky Pass Roadless Area is classified as being in the Kuiu Island Biogeographic Province and makes about 6 percent of the province. It is one of eight inventoried roadless areas found within the province that collectively make up about 53 percent of the province. The Tebenkof Bay and the Kuiu Wildernesses are located in this province and make up about 26 percent of the province. The province also includes the Sumner, Conclusion, and associated islands LUD II areas, which make up about 1 percent of the province. Approximately 61 percent of the Rocky Pass Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 6 percent of the province. It is 1 of 12 inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The Rocky Pass Roadless Area lies completely within the Kupreanof Lowlands Ecological Section and represents 7 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 majority (71 percent) of the roadless area is in the Sumner Strait Volcanics Ecological Subsection. This portion of the roadless area represents 16 percent of the entire ecological subsection, minor portions of which are protected by existing wilderness and LUD II (0.1 percent and 1 percent, respectively) and by other existing non-development LUDs (32 percent). The balance (29 percent) of the roadless area is in the Kake Volcanics Ecological Subsection; this portion of the roadless area represents 17 percent of the entire ecological subsection. Approximately 23 percent of this ecological subsection is protected by other existing non-development LUDs.

The Rocky Pass 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 strong local and national support for managing the area in an unroaded condition, as well as support for designation of the area as wilderness. Designation would create a wilderness with very high cultural, historic, geologic, and recreational values. Designation of the area would also add Congressional protection to about 16 percent of the Sumner Strait Volcanics Ecological Subsection and 17 percent of the Kake Volcanics Ecological Subsection that each have about 1 percent or less in wilderness or LUD II. The roadless area could also be designated as part of a larger wilderness that stretches from Kuiu Island east across Kupreanof Island and connects to the Petersburg Creek-Duncan Canal Wilderness. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System could be very high.

## V. Environmental Consequences

The Rocky Pass Roadless Area would be managed under the existing Forest Plan if Alternative 1 or 2 is implemented. Approximately 94 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 6 percent located along the southwest boundary. The land in the development LUDs provides an estimated 863 acres that are suitable for timber production (1 percent of the suitable acres on the Petersburg Ranger District). Approximately 40 of the suitable acres are classified as high-volume, coarse-canopy old growth. This roadless area contains an estimated 6,439 acres of undiscovered locatable mineral resources; approximately 1,319 of the acres are considered to have moderate potential for development. The timber sales, recreation, minerals, and special use programs would continue. The values associated with the natural settings of roadless area, especially in the southwestern boundary area, could be affected by developments allowed under the Forest Plan. The high cultural, historic, recreational, and geologic values are protected under the Forest Plan.

Under Alternative 3, a 74,130-acre portion of the area in Remote Recreation, Old-growth Habitat, Semi-remote Recreation, Scenic Viewshed, Modified Landscape, and Timber Production LUDs would be converted to Recommended Wilderness. The timber sales, recreation, minerals, and special use programs would continue outside the Recommended Wilderness, but could be restricted within. No timber harvest would be allowed in the Recommended Wilderness area and lands suitable for timber production would be reduced to approximately 33 acres. Designation of the area would add Congressional protection to a portion of the Sumner Strait Volcanics Ecological Subsection and of the Kake Volcanics Ecological Subsection that each have about 1 percent or less in wilderness or LUD II. The values associated with the natural settings of the majority of the roadless area, including cultural, historic, recreational, and geologic values, would be provided long-term protection if designated wilderness.

Under Alternative 4, a 69,826-acre portion of the Remote Recreation, Old-growth Habitat, and Semi-remote Recreation LUDs would be converted to Recommended Wilderness. This would not affect timber sale programs because this area is currently allocated to non-development LUDs. The total area suitable for timber production would not change from Alternative 1. The recreation, minerals, and special use programs would continue outside the Recommended Wilderness, but could be restricted within. Designation of the area would add Congressional protection to a portion of the Sumner Strait Volcanics Ecological Subsection and of the Kake Volcanics Ecological Subsection that each have about 1 percent or less in wilderness or LUD II. The values associated with the natural settings of the majority of the roadless area, including cultural, historic, recreational, and geologic values, would be provided long-term protection if designated wilderness.

Under Alternative 5, a 73,985-acre portion of the area in Remote Recreation, Old-growth Habitat, Semi-remote Recreation, Scenic Viewshed, Modified Landscape, and Timber Production LUDs would be converted to Recommended Wilderness. The timber sales, recreation, minerals, and special use programs would continue outside the Recommended Wilderness, but would be restricted within. No timber harvest would be allowed in the Recommended Wilderness area and lands suitable for timber production would be reduced to approximately 60 acres. Designation of the area would add Congressional protection to a portion of the Sumner Strait Volcanics Ecological Subsection and of the Kake Volcanics Ecological Subsection that each have about 1 percent or less in wilderness or LUD II. The values associated with the natural settings of the majority of the roadless area, including cultural, historic, recreational, and geologic values, would be provided long-term protection if designated wilderness.

Under Alternative 6, nearly the entire roadless area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special uses programs would continue. No timber harvest would be allowed. Designation of the area would add Congressional protection to about 16 percent of the Sumner Strait Volcanics Ecological Subsection and 17 percent of the Kake Volcanics Ecological Subsection that each have about 1 percent or less in wilderness or LUD II. The values associated with the natural settings of the roadless area, including cultural, historic, recreational, and geologic values, would be provided long-term protection if designated LUD II.

Under Alternative 7, a 74,132-acre portion of the area in Remote Recreation, Old-growth Habitat, Semi-remote Recreation, Modified Landscape, and Timber Production LUDs would be converted to Recommended Wilderness. The timber sales, recreation, minerals, and special use programs would continue outside the Recommended Wilderness, but could be restricted within. No timber harvest would be allowed in the Recommended Wilderness area and lands suitable for timber production would be reduced to approximately 60 acres. Designation of the area would add Congressional protection to a portion of the Sumner Strait Volcanics Ecological Subsection and of the Kake Volcanics Ecological Subsection that each have about 1 percent or less in wilderness or LUD II. The values associated with the natural settings of the majority of the roadless area, including cultural, historic, recreational, and geologic values, would be provided long-term protection if designated wilderness.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses programs could be restricted. Mineral prospecting 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 16 percent of the Sumner Strait Volcanics Ecological Subsection and 17 percent of the Kake Volcanics Ecological Subsection that each have about 1 percent or less in wilderness or LUD II. The values associated with the natural settings of the roadless area, including cultural, historic, recreational, 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 243 (in acres) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Land Use Designation** | **Alt 1** | **Alt 2** | **Alt 3** | **Alt 4** | **Alt 5** | **Alt 6** | **Alt 7** | **Alt 8** |
| **Recommended Wilderness** | | | 74,130 | 69,826 | 73,985 | 119 | 74,132 | 79,103 |
| **Wilderness** | | | | | | | | |
| **Recommended Wilderness Nat. Mon.** | | | | | | | | |
| **Wilderness National Monument** | | | | | | | | |
| **Non-wilderness National Monument** | | | | | | | | |
| **Research Natural Area** | | | | | | | | |
| **Special Interest Area** | | | | | | | | |
| **Remote Recreation** | 41,670 | 41,670 | 14 | 23 | 14 | | 14 | |
| **Enacted Municipal Watershed** | | | | | | | | |
| **Old-growth Habitat** | 9,714 | 9,714 | 3,912 | 3,915 | 4,006 | | 3,913 | |
| **Semi-remote Recreation** | 22,577 | 22,577 | 197 | 197 | 134 | | 81 | |
| **Recommended LUD II** | | | | | | 78,984 | | |
| **LUD II** | | | | | | | | |
| **Wild, Scenic, Recreational River** | | | | | | | | |
| **Experimental Forest** | | | | | | | | |
| **Scenic Viewshed** | 409 | 409 | 332 | 409 | 406 | | 406 | |
| **Modified Landscape** | 4,219 | 4,219 | 193 | 4,219 | 233 | | 233 | |
| **Timber Production** | 515 | 515 | 324 | 515 | 324 | | 324 | |
| **TOTAL** | **79,103** | **79,103** | **79,103** | **79,103** | **79,103** | **79,103** | **79,103** | **79,103** |
| **Suitable Timber Lands** | 863 | 863 | 33 | 863 | 60 | 0 | 60 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Bay of Pillars (244)

**ACRES (NFS):** 28,728

**BIOGEOGRAPHIC PROVINCE:** Kuiu Island

**ECOLOGICAL SECTION:** Kuiu-Prince of Wales Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 25

### I. Overview and Description

**(1) Location and Access:** The Bay of Pillars Roadless Area is located on the west side of Kuiu Island bordering Chatham Strait, approximately 40 air miles from Petersburg and 20 air miles from Kake. The Tebenkof Bay Wilderness lies to the south. Petersburg and Kake are served by the Alaska Marine Highway and Petersburg has daily jet service. The roadless area is accessed primarily by boat or float plane on saltwater from Chatham Strait, by the portage trail from Port Camden, or by the road from Rowan Bay. Anchorages are available at several points in both the outer and inner parts of Bay of Pillars, and both the inner and outer bays have accessible shorelines suitable for landing small craft. There are no sites suitable for landing wheeled aircraft. There is no ferry service to Kuiu Island. Access to the interior is by foot or helicopter.

**(2) History:** The Bay of Pillars area is part of the traditional territory of the Kake Tlingit. Evidence of past use include the remains of village sites, gardens, a fort, a fish trap, camps, and culturally modified trees. Traditional knowledge indicates that a portage trail existed between the heads of Bay of Pillars and Port Camden. A cannery operated at the Bay of Pillars from about 1930 to 1950, and employed Alaska Native people from Kake and Port Camden. Several fur farms were located on the islands during the 1940s, all of which are abandoned, as is the cannery. Other historic sites include a salmon hatchery and saltery in the inner bay, cabins, and temporary camps. The hatchery and saltery were on the bank of Kutlaku Creek and operated in 1892. Evidence of beach logging is found in the inner bay. A logging camp was developed at nearby Rowan Bay in about 1973 and is still used during periods of timber harvest. Forest Road 6402, which is the north boundary of the area, was constructed to haul logs to Rowan Bay.

**(3) Geography and Topography:** The Bay of Pillars Roadless Area encompasses two distinct geophysical areas, including the Rowan Sedimentary Hills west of Kutlaku Creek and the Kuiu Plutonic Province east of Kutlaku Creek. The landscape of the Rowan Sedimentary Hills geophysical area is characterized by long, smooth, forested hill slopes bisected by broad, U-shaped glacial valleys underlain by thick glacial till deposits. Bedrock lithology consists primarily of mudstone, greywacke, and turbidites of the Bay of Pillars formation. Bedrock generally weathers to a silty or loamy texture, with a high percentage of sharp, angular rock fragments. These rocks are Silurian in age (400 to 440 million years old). The Kuiu Plutonic Mountains geophysical area consists of all of the major mountains on Kuiu Island. Landforms are typically smooth mountain slopes below relatively extensive areas of rounded alpine ecosystems. Mountain slopes are generally steep, frequently dissected, and shallowly incised. Bedrock lithology consists of plutonic rocks of the Kuiu-Etolin plutonic belt of Miocene age (20 to 22 million years ago) and older plutons of the Chilkat-Prince of Wales plutonic province of Cretaceous age (about 100 million years ago). Rock types are primarily massive, non-foliated intrusive igneous rocks, and are mostly granite, granodiorite, quartz diorite, and quartz monzodiorite.

The roadless area is characterized by a large, open bay with numerous small islands, and a large inner bay connected to the outer bay by a narrow, rocky, but navigable channel. The outer bay is subject to occasional strong wave action. Kutlaku Lake is a major feature accessed from the south arm of the inner bay. The inner and outer bays are surrounded by peaks and ridges which average about 1,800 feet; some peaks reach over 3,000 feet. Vegetation is predominantly spruce-hemlock forest below alpine. Muskeg communities are infrequent and found primarily on the lower slopes and in valley bottoms. The area contains 64 miles of shoreline along saltwater. This roadless area

contains 797 acres of islands and islets (two island are over 150 acres), 178 acres of lakes, 1,228 acres of alpine, and 1,205 acres of rock. There are no mapped ice or snow features. Stream density varies from a high of 4.1 miles/1,000 acres in the Kuiu Plutonic Mountains to 3.7 miles/1,000 acres in the Rowan Sedimentary Hills. The eastern portion of the area contains a high percentage of high gradient contained streams with sandy substrates derived from granitic soil material. The western portion of the area is typified by relatively large watersheds with main channels flowing through broad glacial valleys.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The roadless area is in the Kuiu Island Biogeographic Province. This province is generally characterized by rolling, subdued topography and extensive muskeg areas, but may have localized, rugged terrain. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The Bay of Pillars Roadless Area is contained entirely within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F), represented by two ecological subsections (see table below). The Rowan Sediments Ecological Subsection covers about two-thirds of the Bay of Pillars Roadless Area. Glacially smoothed hills and broad valleys carved from sedimentary rock on northcentral Kuiu Island support highly productive hemlock or hemlock-spruce forests. Valley bottoms contain a variety of wetlands that have developed in poorly drained organic soils. The Kuiu-Prince of Wales Granitics Ecological Subsection covers the remaining third and is typified by rugged mountaintops of igneous rock which rise above rounded peaks. The higher crests capture incoming precipitation which remains as snowpack much of the year. Moderately productive hemlock forests are found below the alpine zone (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kuiu-Prince of Wales Fjordlands | Rowan Sediments | 63% |
| | Kuiu-Prince of Wales Granitics | 37% |

**(b) Soils:** Bedrock types are non-calcareous sedimentary rocks, such as mudstone, sandstones and graywackes, or intrusive igneous rocks, such as granite, granodiorite, quartz diorite, and quartz monzodiorite. Bedrock generally weathers to silty or loamy texture soils. The western portion of this geographic area, the Rowan Sedimentary Hills, comprises one of the most productive forest areas on Kuiu Island.

Soils in this area are formed in a wide variety of parent material, including bedrock, colluvium, and glacial drift. In general, well- or moderately well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are vacidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly drained soils developed on less-sloping areas and/or areas with impermeable soil materials, such as broad glacial valleys underlain by glacial till. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg. Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or are extremely shallow and rocky. Large alluvial fans on mountain toe slopes are characteristic of the Kuiu Plutonic Mountains.

**(c) Vegetation:** The area is heavily covered by spruce and hemlock to an elevation of 2,000 feet. Alpine vegetation (mapped as 1,228 acres) dominates areas above 2,000 feet. Nearly all of the alpine ecosystems on Kuiu Island occur in the Kuiu Plutonic Mountains geophysical area at elevations of about 2,000 to 3,350 feet. Brush communities dominated by Sitka alder and salmonberry occur in narrow snow avalanche tracks that run from alpine areas to near sea level. Mountain hemlock plant communities dominate the upper mountain slopes immediately below the subalpine zone. Nearly all of the well-drained hill slope positions in the Rowan Sedimentary Hills area are occupied by the highly productive western hemlock/blueberry/shield fern plant associations. This plant community forms rather large, contiguous

forest areas. Sitka spruce communities and western hemlock/devils club communities occur on large alluvial fans. There is relatively little interspersed muskeg on lower slopes and in broad glacial valleys. Muskegs mapped as approximately 100 acres are difficult to estimate due to their small size and association with forested sites.

There are approximately 24,546 acres mapped as forestland, of which 20,364 acres or 83 percent are mapped as productive old-growth forest. Of the productive old growth, 13,839 acres or 68 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,422 acres of high-volume, coarse-canopy old growth. There are 197 acres of second-growth forest where beach timber harvest has occurred in the past.

**(d) Fish Resources:** There are five ADF&G numbered salmon-producing streams within the roadless area. The most important are Kutlaku and Kwatahein Creeks. The area supports pink, chum, coho, and sockeye salmon, as well as steelhead and cutthroat trout, and Dolly Varden char.

**(e) Wildlife Resources:** The Bay of Pillars area is high value habitat for black bear, deer, wolves, furbearers, and land birds. This area has been identified as an important wintering area and migration resting area for waterfowl. A large black bear population on Kuiu Island attracts numerous hunters to this area. Other terrestrial mammals include bats, red squirrel, mice, shrews, and voles. There are occasional sightings of fisher and wolverine, but these are considered incidental species at the edge of their range.

Bird species include bald eagles, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, marbled murrelets, osprey, spruce grouse, ptarmigan, sandhill cranes, trumpeter swans, Canada geese, and great blue herons. Red-throated, Pacific, and common loons all occur around Kuiu Island. Several plover, yellowlegs, and sandpiper species occur mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Sea mammals known to inhabit the waters surrounding Kuiu Island are the Pacific white-sided dolphin, killer whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal. Sea otters occur on both eastern and western shores of Kuiu Island.

Amphibians known to occur on Kuiu Island include rough-skinned newt, western toad, and wood frog. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts. Wood frogs are found in most of the ecosystems found in Southeast Alaska except for marine, estuarine, and riverine.

**(5) Management Direction and Current Uses:** The 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, Remote Recreation, Semi-remote Recreation, Old-growth Habitat, and Wild River.

| LUD | Acres |
|---|---|
| Timber Production | 946 |
| Remote Recreation | 20,024 |
| Semi-remote Recreation | 4,144 |
| Old-growth Habitat | 2,742 |
| Wild River | 872 |

Approximately 3 percent of the roadless area was allocated to one development LUD, Timber Production. The Timber Production LUD is located primarily in the southeast corner of the roadless area.

The majority of land in this area, approximately 97 percent of the roadless area, was allocated to LUDs that do not allow development. Approximately 70 percent of the roadless area was allocated to the Remote Recreation LUD. Approximately 14 percent of the roadless area was allocated to the Semi-remote Recreation LUD, mostly in and around the Bay of Pillars. Small associated islands off the coast were also allocated to the Semi-remote Recreation LUD. Near Rowan Bay and Port Camden, approximately 10 percent of the roadless area was allocated to the Old-growth Habitat LUD. In the Kutlaku Creek and Lake area, approximately 3 percent of the roadless area (2 river miles) were allocated to the Wild River LUD.

Few Forest Service management activities have occurred in the area. The outer bay is frequently used as an anchorage by commercial fishermen. Recreation uses include bear hunting, sockeye salmon fishing, steelhead fishing, sea kayaking, and camping. Boating and sport fishing are popular. A sport fishing charter operation anchors for the summer in the bay. The Bay of Pillars public use shelter is located on the south side of the outer bay. There were eight outfitter/guide permits issued in 2000 for 151 service days of use. The Bay of Pillars Portage Trail connects the inner bay with Port Camden. This one-mile canoe/kayak route receives moderate recreational use, which has been steadily increasing since its establishment in the 1980s. The area, especially Kutlaku Creek, is used for subsistence by Kake residents and other subsistence users. A fishpass (Alaska steppass) was installed on Kwatahein Creek and is easily accessible from the shore. The fishpass will require periodic maintenance. A Forest Service electronics site is located approximately 3 miles south of Port Camden.

**(6) Appearance (Apparent Naturalness):** The area appears unmodified except for the remains of an abandoned cannery on the south side of the outer Bay of Pillars, just outside of the roadless area boundary. The topography of the area tends to minimize views of modified areas outside the roadless area. Most of the area is not visible from present ferry and cruise ship routes.

**(7) Surroundings (External Influences):** This roadless area is surrounded mostly by National Forest System land and the Bay of Pillars. State land is adjacent to the area in Rowan Bay. The Tebenkof Bay and Kuiu Wildernesses lie to the south. The region north of the Bay of Pillars area is heavily modified by timber management activities centered around Rowan Bay. Forest Road 6402 (the Isthmus Road), extending southeast from Rowan Bay, skirts the north side of the inner bay. Traffic noise is apparent in the bay when the road is in use. Visually, however, the road is mostly screened. Other modifications on lands to the north are unlikely under current management direction because the area is in an old-growth habitat reserve. Chatham Strait, an important marine travel route, lies west of the roadless area.

**(8) Attractions and Features of Special Interest:** The area contains eight inventoried recreation places, which cover 749 acres, or 3 percent of the roadless area. These recreation places include Kutlaku Lake, the cannery site, and the inner bay. Fishing on Kutlaku Creek is an important attraction for recreationists. Two miles of the creek meet the criteria for Wild River classification under the National Wild and Scenic Rivers System, and it was recommended for Wild River classification in the 1997 Forest Plan ROD. The presence of good anchorage sites attracts boating use to the bay. A canoe/kayak portage trail connects the inner Bay of Pillars to Port Camden on the east coast of Kuiu Island. Rocky pillar formations can be found in the bay. The tidal rip between the inner and outer bay is noted for producing whitewater wave action, which is a thrill for canoeists and kayakers.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** Developments along the northern edge of the roadless area have reduced its size. An area at the head of Kutlaku Bay that has been beached logged, but not roaded, has been added to the roadless area. Several small areas have been excluded along the developed boundaries 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 is essentially unmodified. The Bay of Pillars public use shelter is of rustic design, made of logs and hand split shakes. Evidence of old structures include several abandoned fur farms on islands in the outer bay, a cannery site near the mouth of Kutlaku Creek and a cannery site at Kwatahein Creek. The road on the north side of the inner bay has also affected the area's natural integrity.

Overall, the area is suitable for wilderness classification. All or part of the area could be added to the adjacent Tebenkof Bay Wilderness.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and primitive recreation within the area. At times, use of floatplanes and powerboats may disrupt visitors for brief periods. Noise from logging trucks on the adjacent road is audible during periods of harvest activity. Present recreation use levels are moderate. In general, a person camped in the outer bay is likely to see others during the summer months. The enclosed character of the bays in the area generally allows the visitor to feel remote from the sights and sounds of human activity.

Access by boat into the area requires extended boating time in exposed waters, and entering the inner bay requires boating skill and may present great risk. 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 recreation opportunities primarily in a roaded 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) | 12,513 | 44% |
| Semi-Primitive Non-Motorized (SPNM) | 1,683 | 6% |
| Semi-Primitive Motorized (SPM) | 12,585 | 44% |
| Roaded Natural (RN) | 16 | 0% |
| Roaded Modified (RM) | 1,931 | 7% |

The area contains eight inventoried recreation places, which cover 749 acres, or 3 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| P | 1 | 141 |
| SPNM | 0 | 0 |
| SPM | 4 | 502 |
| RN | 1 | 16 |
| RM | 2 | 90 |

The only developed recreation facility is the Bay of Pillars shelter.

**(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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Bay of Pillars Roadless Area was given a rating of 25 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 also given a rating of 25.

**(4) Ecologic and Geologic Values:** There are no known areas of unique or uncommon plant/soils associations in the area. The roadless area could be added to the Tebenkof Bay and Kuiu Wildernesses, which lie to the south and, possibly, to other roadless areas on the island. This would create a larger wilderness.

**(a) Fish Resources:** VCUs 402, 403, and 420 are rated as a primary salmon producers around Rowan Bay, Bay of Pillars, and Port Camden, respectively, by the Tongass Fish and Wildlife Resource Assessment. No VCUs were rated as primary sport fish producers (ADF&G, 1998).

There are five ADF&G numbered salmon producing streams within the area, producing sockeye, pink, chum, and coho salmon; steelhead and cutthroat trout; and Dolly Varden char. The most important streams are Kutlaku and Kwatahein Creeks. Kutlaku has an annual estimated peak escapement of 1,300 sockeye, 12,000 pink, and 650 chum. Kutlaku Creek has high commercial and historic values for sockeye salmon. Historically, a hatchery and saltery were located near the stream. Both the stream and the lake have high quality spawning and rearing habitat for sockeye and very good coho salmon smolt capability.

Kwatahein Creek has an estimated annual peak escapement of 53,000 pink, 3,500 coho, and good runs of steelhead. Subsistence fishermen, mostly from Kake, harvest sockeye at the mouth of Kutlaku, and sport anglers are beginning to fish steelhead in Kwatahein. An "Alaska steppass" fish ladder was constructed in 1989 at Kwatahein Creek to make the upper watershed accessible to pink and chum salmon.

**(b) Wildlife Resources:** The Bay of Pillars Roadless Area has high value habitat for black bear, Sitka black-tailed deer, wolves, furbearers, land birds, and waterfowl. A large black bear population on Kuiu Island attracts hunters to this area. Based on data compiled from 1985 to 1994, VCUs 403 and 420 near Rowan Bay and Bay of Pillars are listed among the top 25 percent of VCUs for black bear harvest (ADF&G, 1998). This area has also been identified as an important wintering area and migration resting area for waterfowl. Sea otters occur in both eastern and western waters off Kuiu Island.

The roaded area to the northeast has been identified as an important "pinchpoint" for land migration between north and south parts of Kuiu Island. This area, although roaded, does not receive much traffic since it does not connect to any community. The proposed log transfer facility on Threemile Arm could further reduce the use of this road.

**(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, including 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. There are ten known northern goshawk nesting locations on Kuiu Island; two in the Bay of Pillars area. In addition, 12 sensitive plant species are known or suspected to occur in the Petersburg 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 unique geologic features.

**(5) Scientific and Educational Values:** The abandoned cannery site on private land attracts some visitors. Sockeye salmon spawning in Kutlaku Lake are a seasonal ecologic feature. The enclosed setting of the bay and the rocky pillar formations are also attractions. The area offers opportunities to study forests, fish, wildlife, and geologic processes.

**(6) Scenic Values:** The area appears unmodified except for the remains of an abandoned cannery on private land on the south side of the outer Bay of Pillars, just outside of the roadless area boundary. Two harvest units outside the area are visible from portions of the surface of the inner Bay of Pillars. To the west, the steep-sided bay frames views of islands and trees in the foreground, with Baranof Island's snowcapped peaks in the background.

When at Kutlaku Lake and other locations in the area, the enclosed nature tends to minimize views of modified areas outside the roadless area. The Bay of Pillars Roadless Area is not visible from present ferry and cruise ship routes.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Bay of Pillars, a saltwater use area and boat anchorage; Kutlaku Lake, a dispersed recreation area; the Rowan Bay community; Kuiu Island Canoe and Kayak Portages; and Kutlaku Creek and Lake, a recommended Wild, Scenic and Recreational River.

Thirty-eight percent of this roadless area is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type). Thirty-seven percent is also inventoried Variety Class B (possessing landscape diversity that is common for the character type). Approximately 24 percent is inventoried Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, approximately 95 percent, is in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. Approximately 1 percent is in EVC Type II, where the area appears to be untouched by human activity. About 1 percent of the area is in EVC Type IV, where changes in the landscape are easily noticed by the average person and may attract some attention. Three percent is 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:** The Bay of Pillars area is in the traditional territory of the Kake Tlingit. Evidence of past use includes the remains of villages, gardens, a fort, a fish trap, camps, and culturally modified trees. Traditional knowledge indicates a portage trail existed between the heads of Bay of Pillars and Port Camden. A cannery operated at the Bay of Pillars from about 1930 to 1950, and employed Native people from Kake and Port Camden. Several fur farms were located on the islands during the 1940s, all of which are abandoned, as is the cannery. Other historic period sites include a salmon hatchery and saltery, cabins, and camps. Evidence of beach logging is found in the inner bay. A logging camp was developed at nearby Rowan Bay in about 1973 and is still used during periods of timber harvest. Forest Road 6402, which is the north boundary of the area, was constructed in 1980 to haul logs to Rowan Bay. The area receives some subsistence use, mostly by residents of Kake, who target the sockeye salmon run at Kutlaku Creek. VCU 420, which covers the eastern portion of the roadless area, was listed with the highest value community use areas. No VCUs 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 area is relatively enclosed by topographic divides. Feasibility of management as wilderness or in a roadless condition is high. Forest Road 6402 comes to within a few hundred feet of the inner bay and has reduced the manageability of that area as a primitive setting. The road also isolates the area on the north side of Bay of Pillars from the remainder of the roadless area. Development of private land on the cannery site could influence future management. All or part of the area could be added to the Tebenkof Bay and Kuiu Wildernesses to the south. The drainages that are affected by the road system in the northeast corner of the roadless area could be excluded and this would increase the manageability of the overall area. Management as a wilderness or in an unroaded condition would be consistent with Wild River LUD management for Kutlaku Creek and Kutlaku Lake.

## 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. While the roadless area is not easily accessed from Kake, the closest stop on the Alaskan Marine Highway, some increase in tourism is expected. A potential trail corridor exists from saltwater to Kutlaku Lake. Potential sites exist at Kutlaku Creek for one or more recreation cabins or shelters. There is potential for additional outfitter and guide permits. A potential shelter location has been identified for kayakers traveling between this area and the Tebenkof Bay Wilderness through the open waters of Chatham Strait. If a boat launch were constructed in Rowan Bay, it would open up the potential for access directly into the inner bay from existing roads. This would open up other recreation opportunities both for individuals and for outfitter/guides.

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

**(3) Fish Resources:** Kutlaku Lake has been identified as having potential for fertilization to increase sockeye salmon production. Currently, there is no fish habitat enhancement projects planned.

**(4) Wildlife Resources:** There are no wildlife habitat improvement projects planned in the area.

**(5) Timber Resources:** There are approximately 20,364 acres mapped as productive old growth in the roadless area. Approximately 197 acres are second growth. Of this area, 51,833 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), less than 10 acres or less than 1 percent of this roadless area are estimated to be suitable for timber production and are mapped as high-volume old growth. Of these suitable acres, none are mapped as high-volume, coarse-canopy old growth. There are no plans for timber harvest within the 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:** There are no inventoried areas with high mineral development potential in this roadless area.

**(8) Transportation and Utilities:** There are no potential transportation or utility corridors in the roadless area. The only road that might be needed for timber harvest would be in the southeast portion of the roadless area.

**(9) Water Availability and Use:** No developed recreation 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:** The area contains no Research Natural Areas, and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** The Federal Aviation Administration is authorized to maintain communication facilities at a site approximately 2 miles south of Port Camden.

Forest Service records show that 8 outfitter/guides used this area in 2000 for 11 service days for freshwater fishing, 24 service days for camping, 78 service days for remote setting nature tours, and 38 service days for black bear hunting.

**(12) Land Status:** The roadless area is entirely National Forest System land. Encumbered land within the roadless area are located north of Kutlaku Lake. There are approximately 23 acres of private land adjacent to the roadless area.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** There is strong interest on the part of inhabitants of some local communities to retain the roadless character of unroaded parts of Kuiu Island.

**(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 bill did not include this roadless area. In 2001, HR 2908 proposed that most of the roadless area be designated as part of the Tebenkof Bay Wilderness and Kuiu Wilderness.

**(c) Public Input During Forest Plan Revision and Appeals:** The Kake Tribal Corporation recommended that all of north Kuiu bays and inlets, especially Bay of Pillars, be protected from timber harvest. They felt that the Bay of Pillars should be managed as an Old-growth Habitat LUD or LUD II to protect fish, wildlife, scenic and recreation values. Timber industry organizations recommended that the area be managed as Timber Production LUD. They felt that there was no justification for other classifications and that continued development would extend the life of the logging camp at Rowan Bay.

The Narrows Conservation Coalition, Southeast Alaska Conservation Council, and the Point Baker Community Council recommended that all of north Kuiu be managed for primitive recreation. The Rainforest Campaign and others stated that the area should be LUD II or wilderness. The Wrangell Resource Council and the City of Port Alexander supported preserving the area to protect wildlife habitat, old growth, and scenic and recreation values.

**(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, while others wanted the current level of development to continue.

**(e) Public Input Expressed for Project-level EISs and Other Input:** No comments are available.

**(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 that among the remaining, undeveloped areas left on Kuiu Island, three areas offer outstanding fish and wildlife habitat that should be protected. These include Bay of Pillars, Camden, and East Kuiu. Protection of this area, particularly in combination with the East Kuiu (#245) and Tebenkof Bay Wilderness Area, would conserve valuable remaining undisturbed, forested habitats on the island. They expressed 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 city of Petersburg said they were opposed to designation of this area as wilderness because of the potential long-term economic effects 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.

The City of Kupreanof recommended the Bay of Pillars for permanent protection as wilderness.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 244, 245, and 246 as adjacent to the existing Tebenkof Bay Wilderness and Kuiu Wilderness and recommended them for permanent protection as wilderness. They indicated that this combination would create a contiguous wilderness area of approximately 265,000 acres. SEACC recommended that the Bay of Pillars, East Kuiu, and South Kuiu roadless areas be designated wilderness and added to the existing Tebenkof Bay and Kuiu Wilderness. This combination would create a contiguous wilderness of approximately 265,000 acres.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Tebenkof Bay Wilderness is adjacent to the southern boundary of the Bay of Pillars Roadless Area, and the Kuiu Wilderness is immediately south of the Tebenkof Bay Wilderness. The East Kuiu Roadless Area borders the Bay of Pillars Roadless Area to the east. The Camden Roadless Area is just across Forest Road 6402 to the north. South Baranof Wilderness is across Chatham Strait about 10 miles 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) | 115 | 130 |
| Petersburg (Pop. 3,224) | 40 | 95 |
| Wrangell (Pop. 2,308) | 65 | 65 |
| Ketchikan (Pop. 14,070) | 125 | 135 |

Kake (approximately 20 air miles to the northeast), Petersburg, and Wrangell are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Bay of Pillars Roadless Area is located on the west side of Kuiu Island bordering Chatham Strait. The Tebenkof Bay Wilderness lies to the south. The Bay of Pillars area is characterized by a large, open bay with numerous small islands, and a large inner bay connected to the outer bay by a narrow, rocky, but navigable channel. The inner and outer bays are surrounded by peaks and ridges, which average about 1,800 feet; some peaks reach over 3,000 feet. The outer bay is subject to occasional strong wave action. Kutlaku Lake is a major feature accessed from the south arm of the inner bay.

The area is mostly unmodified; however, it is influenced to some degree by developed lands along its northeast borders. The natural integrity and apparent naturalness is very high. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

Approximately 38 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The area has very high cultural and historic values. The Kutlaku Creek and Lake are recommended for Wild River designation under the Forest Plan Revision.

The roadless area includes about 13,839 acres of high-volume, old-growth forest. Of these acres, 1,422 are mapped as high-volume, coarse-canopy old growth.

The Bay of Pillars Roadless Area is classified as being in the Kuiu Island Biogeographic Province and makes about 6 percent of the province. It is one of eight inventoried roadless areas found within the province that collectively make up about 53 percent of the province. The Tebenkof Bay and the Kuiu Wildernesses are located in this province and make up about 26 percent of the province. The province also includes the Sumner, Conclusion, and associated islands LUD II area, which make up about 1 percent of the province.

The Bay of Pillars Roadless Area lies completely within the Kuiu-Prince of Wales Fjordlands Ecological Section and represents 3 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 (63 percent) of the roadless area is in the Rowan Sediments Ecological Subsection; this portion of the roadless area represents 14 percent of the entire ecological subsection, 27 percent of which is in existing wilderness and 27 percent is protected by existing non-development LUDs. The remaining 37 percent of the roadless area is in the Kuiu-Prince of Wales Granitics Ecological Subsection; this portion of the roadless area represents 7 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.

The Bay of Pillars Roadless Area was rated 25 out of a possible 28 points under the 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 strong local support for managing the area in an unroaded condition, and there is also both local and national support for designating this area as wilderness. Designation would create a wilderness with high cultural, historic, old growth, and ecologic values, and would expand the Tebenkof Bay and Kuiu Wildernesses to the north. 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 Bay of Pillars Roadless Area would be managed under the existing Forest Plan if Alternative 1 or 2 is implemented. Approximately 97 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 3 percent. The land in the development LUDs provides an estimated 3 acres that are suitable for timber production (less than 1 percent of the suitable acres on the Petersburg Ranger District). None of the suitable acres are identified as high-volume, coarse-canopy old growth. The timber sales, recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area, including the cultural, historic, old growth, and scenic values are mostly protected under the Forest Plan.

Under Alternative 3, a 23,281-acre portion of the area in Remote Recreation, Old-growth Habitat, Semi-remote Recreation, Wild/Scenic/Recreation River, and Timber Production LUDs would be converted to Recommended Wilderness. No timber harvest would be allowed and the recreation, minerals, and special use programs could be restricted within the Recommended Wilderness area. There would be no land in the roadless area identified as suitable for timber harvest. 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 cultural, historic, old growth, and scenic values, would be provided long-term protection if designated wilderness.

Under Alternative 4, a 20,926-acre portion of the Remote Recreation, Old-growth Habitat, and Semi-remote Recreation, and Wild/Scenic/Recreation River LUDs would be converted to Recommended Wilderness. 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. The recreation, minerals, and special use programs could be restricted within the Recommended Wilderness 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 majority of the roadless area, including cultural, historic, old growth, and scenic values, would be provided long-term protection if designated wilderness.

Under Alternative 5, a 20,852-acre portion of the area in Remote Recreation, Old-growth Habitat, Semi-remote Recreation, and Wild/Scenic/Recreation River LUDs would be converted to Recommended Wilderness. 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. The recreation, minerals, and special use programs could be restricted in the Recommended Wilderness, 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 cultural, historic, old growth, and scenic values, would be provided long-term protection if designated wilderness.

Under Alternative 6, 7, or 8, the roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special use 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, 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 244 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | 23,281 | 20,926 | 20,852 | 28,719 | 28,728 | 28,728 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | 20,024 | 20,024 | 2,252 | 2,263 | 2,323 | | | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | 2,742 | 2,742 | 1,338 | 2,740 | 2,740 | | | |
| Semi-remote Recreation | 4,144 | 4,144 | 1,853 | 1,853 | 1,868 | | | |
| Recommended LUD II | | | | | | 10 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | 872 | 872 | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | 946 | 946 | 4 | 946 | 945 | | | |
| **TOTAL** | **28,728** | **28,728** | **28,728** | **28,728** | **28,728** | **28,728** | **28,728** | **28,728** |
| Suitable Timber Lands | 3 | 3 | 0 | 3 | 3 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME**: East Kuiu (245)

**ACRES (NFS):** 46,395

**BIOGEOGRAPHIC PROVINCE:** Kuiu Island

**ECOLOGICAL SECTION:** Kuiu-Prince of Wales Fjordlands and Kupreanof Lowlands

**2003 WILDERNESS ATTRIBUTE RATING:** 26

## I. Overview and Description

**(1) Location and Access:** The East Kuiu Roadless Area lies directly east of the Tebenkof Bay Wilderness and the Kuiu Wilderness on Kuiu Island, and borders the Sumner and Keku Straits. It is approximately 20 air miles south of Kake and 40 air miles west of Petersburg. Point Baker, a small community on the northwest shore of Prince of Wales Island, is approximately 10 miles by boat from Reid Bay in the southeast portion of the roadless area. Petersburg and Kake are served by the Alaska Marine Highway and Petersburg has daily jet service. There is no ferry service to Kuiu Island. The roadless area is accessed primarily by saltwater via boat or by floatplane. The northern end can be accessed via Road 6402. Several good anchorages can be found in Reid, Alvin, and No Name Bays, as well as at the head of Seclusion Harbor. There are no sites suitable for landing wheeled aircraft. Access to the interior is by foot or helicopter.

**(2) History:** The area is in the traditional territory of the Kake and Kuiu Tlingit. Numerous cultural resource inventories have identified a variety of cultural sites. Recorded sites include villages, camps, gardens, fish traps, and petroglyphs. In 1793, Captain Vancouver ended his first explorations in Southeast Alaska at Conclusion Island, which is part of the roadless area. Historic period sites in the area include fur farms and cabins. This area was part of the Alaska Pulp Corporation long-term timber sale area. A logging camp was developed at nearby Rowan Bay that is still used for timber sales in the general area. Road development has occurred to the north, along the southern shore of Threemile Arm. Forest Road 6402, constructed in 1986, connects Port Camden and Threemile Arm with the log transfer facility in Rowan Bay. Beach logging has occurred in each of the bays in the East Kuiu Roadless Area.

**(3) Geography and Topography:** This area includes portions of three geophysical areas, including the Kuiu Plutonic Mountains, the Keku Volcanic Plateau, and the Alvin Graywacke Hills. Landforms of this area are similar to those of the Bay of Pillars Roadless Area (244). In the Kuiu Plutonic Mountains, landforms are typically smooth mountain slopes below relatively extensive areas of rounded alpine ecosystems. Mountain slopes are generally steep, frequently dissected, and shallowly incised. Bedrock lithology consists of plutonic rocks of the Kuiu-Etolin plutonic belt of Miocene age (20 to 22 million years ago) and older plutons of the Chilkat-Prince of Wales plutonic province of Cretaceous age (about 100 million years ago). Rock types are primarily massive, non-foliated intrusive igneous rocks; mostly granite, granodiorite, quartz diorite, and quartz monzodiorite. In the Keku Volcanic Plateau area, landforms are typically prominently benched hills and lava plateaus typical of volcanic terrain. The present landscape is largely the result of glacially eroded alternating strata of volcanic flows. Southeast-facing slopes are long and relatively gentle, while northwest facing slopes are typically steep and stair-stepped, with numerous cliffs. Bedrock lithology is dominated by extrusive igneous rocks. Rock types are primarily rhyolite, rhyodiorite, basalt, and other mafic extrusive rocks that have been extremely altered and brecciated in many areas. Volcanic conglomerate and volcaniclastic graywackes are scattered throughout the area. This landscape is much younger than the rest of Kuiu Island, as these rocks are of Pleistocene age (less than 1 million years old). The landscape of the Alvin Graywacke Hills area is characterized as a series of rolling hills, most of which are less than 1,500 feet in elevation. Hill slopes are typical of glaciated terrain. Bedrock lithology consists primarily of sedimentary rocks of the Bay of Pillars formation. Common rock types are graywackes and mudstone turbidites of Silurian age (400 to 440 million years ago). Glacial deposits are scattered throughout this landscape on the more gentle slopes.

Bordered to west by the Tebenkof Bay Wilderness, this area encompasses the slopes facing Keku Strait, and several major bays, including Reid, Alvin, and No Name Bays. A portion of the shoreline adjacent to Threemile Arm is also included. Steeper slopes are forested, intermixed with low productive forest on the more gently sloping hills. Elevations range from sea level to 1,885 feet.

The area contains 135 miles of shoreline along saltwater. Islands make up 3,597 acres. The two largest islands are Conclusion Island (2,030 acres) and Sumner Island (940 acres). Alpine areas cover about 549 acres, ice and snow covers about 66 acres, and rock covers about 587 acres.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Kuiu Island Biogeographic Province. This province is generally characterized by rolling, subdued topography, and localized, rugged terrain. Highly productive forests are often found in this province, especially on calcareous soils derived from ancient coral reefs. There are no unique or uncommon plant/soil associations in the roadless area.

Ecological Section/Subsection. The East Kuiu Roadless Area is contained mostly within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F) and also contains portions within the Kupreanof Lowlands Ecological Section (M247G). These areas are represented by four ecological subsections (see table below). Covering half of the East Kuiu Roadless Area, the Alvin Bay Sediments Ecological Subsection includes sedimentary coastal lowlands and angular-sided hills with smooth summits, remnants of substantial glaciation. Well-drained, productive soils, found on upland slopes, are cloaked in forests of hemlock and hemlock-Alaska yellow cedar, while poorly drained soils and associated wetlands are found in coastal lowlands. The Kuiu-Prince of Wales Granitics Ecological Subsection covers about 16 percent of the roadless area and is typified by rugged mountaintops of igneous rock that rise above rounded peaks. The higher crests capture incoming precipitation, which remains as snowpack much of the year. Moderately productive hemlock forests are found below the alpine zone. The Affleck Canal Till Lowlands Ecological Subsection, covering a small portion of the east side of the East Kuiu Roadless Area is restricted to the glacially exposed peninsulas and low hills. Poorly drained soils and wetlands cover most of the area. The Sumner Strait Volcanics Ecological Subsection covers less than a third and lies in the southeast portion of the East Kuiu Roadless Area. This subsection is composed of water-resistant volcanic flows of relatively recent origin rising above lowland glacial deposits. Shallow organic soils are found on long gentle slopes and mineral soils on short, steep slopes (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kuiu-Prince of Wales Fjordlands | Alvin Bay Sediments | 51% |
| | Kuiu-Prince of Wales Granitics | 16% |
| | Affleck Canal Till Lowlands | 6% |
| Kupreanof Lowlands | Sumner Strait Volcanics | 27% |

**(b) Vegetation:** Muskeg/forested wetland complexes are interspersed with mixed conifer plant communities on better-drained sites. Due to their small size and association with forested sites, accurate acreage estimates are difficult and only approximately 100 acres have been mapped. Timbered hill slopes are dominantly western hemlock, Sitka spruce, and Alaska-cedar plant communities. Mountain hemlock plant communities dominate the upper mountain slopes immediately below the subalpine zone. Brush communities dominated by Sitka alder and salmonberry occur in narrow snow avalanche tracks that run from alpine areas to near sea level.

There are approximately 44,092 acres mapped as forest land of which 29,517 acres (67 percent) are mapped as productive old-growth forest. Of the productive old growth, 19,241 acres (65 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 3,075 acres of high-volume, coarse-canopy old growth. There are 955 acres of second-growth forest where timber harvest has occurred in the past.

**(c) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock, colluvium, and glacial drift. In general, well- or moderately well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly drained soils developed on more gently sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from forested wetlands to open muskeg. A small portion of the area has alpine soils. These soils are either mostly shallow, very wet organic soils or extremely shallow and rocky.

**(d) Fish Resources:** This area has 16 Alaska Department of Fish and Game (ADF&G) numbered salmon producing streams. Streams in the roadless area produce coho, pink, sockeye, and chum salmon. The best producers may be the stream at the head of Seclusion Harbor and Alvin Bay Creek. The headwaters to Alecks Creek are found in this area. Generally, the area does not produce large numbers of salmon, and sport fishing pressure is low.

**(e) Wildlife Resources:** Salt Lagoon-Seclusion Harbor has a unique combination of freshwater and saltwater habitats, making it valuable habitat for Sitka black-tailed deer, waterfowl, black bear, moose, wolves, furbearers, marine mammals, and bald eagles. This is also true for estuarine habitat found in Alvin Bay, Reid Bay, and at the head of Threemile Arm.

Other terrestrial mammals include bats, mink, muskrat, ermine, red squirrel, mice, shrews, and voles. There are occasional sightings of fisher and wolverine, but these are considered incidental species at the edge of their range.

Bird species include bald eagles, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, marbled murrelets, osprey, spruce grouse, ptarmigan, sandhill cranes, trumpeter swans, Canada geese, and great blue herons. Red-throated, Pacific, and common loons all occur around Kuiu Island. Several plover, yellowlegs, and sandpiper species occur mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Sea mammals known to inhabit the waters surrounding Kuiu Island are the Pacific white-sided dolphin, killer whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal. Sea otters use the marine waters along this roadless area from Port Beauclerc to Threemile Arm.

Amphibians known to occur on Kuiu Island include rough-skinned newt, western toad, and wood frog. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts. Wood frogs are found in most of the ecosystems found in Southeast Alaska except for marine, estuarine, and riverine.

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

| LUD | Acres |
|---|---|
| Modified Landscape | 17,364 |
| Timber Production | 12,320 |
| Old-growth Habitat | 8,776 |
| Semi-remote Recreation | 4,785 |
| LUD II | 3,071 |
| Remote Recreation | 79 |

Much of the roadless area, approximately 64 percent, was allocated to development LUDs (Modified Landscape and Timber Production). Approximately 37 percent of the roadless area was allocated to the Modified Landscape LUD. This LUD is mostly adjacent to the shoreline. In areas adjacent to the Tebenkof Bay Wilderness, approximately 27 percent of the roadless area was allocated to the Timber Production LUD.

Approximately 36 percent of the roadless area was allocated to non-development LUDs (Old-growth Habitat, Semi-remote Recreation, LUD II, and Remote Recreation). Patches of the Old-growth Habitat LUD were assigned to approximately 19 percent the roadless area, located around Seclusion Harbor, No Name Bay, Reid Bay, and in the northernmost part of the area. Approximately 10 percent of the roadless area was allocated to the Semi-remote Recreation LUD, located adjacent to the Kuiu Wilderness and in islands less than 1,000 acres east of the Kuiu Island coast. Conclusion and Sumner Islands were assigned to the LUD II, which accounts for approximately 7 percent of the roadless area. Less than 1 percent of the roadless area was allocated to the Remote Recreation LUD, located in a small pocket of land about a half-mile west of No Name Bay.

No timber harvest is currently proposed for this roadless area. The area is planned for timber harvest on the 10-year sale schedule.

Recreation uses include black bear, deer, and waterfowl hunting, pink and coho salmon fishing, steelhead fishing, sea kayaking, camping, beachcombing, rockhounding, and viewing of scenery from marine waters. There are no public recreation cabins in the roadless area. The Alecks Creek Portage Trail is 4 miles long and connects the Tebenkof Bay Wilderness to Keku Strait on the other side of the island. This trail is extremely difficult and is not recommended as a portage in its current condition. One outfitter/guide permit was issued in 2000, involving 60 service days of camping. There is evidence of past beach logging in the area. There is limited subsistence use, primarily by residents of Point Baker and Port Protection (with a combined population of approximately 100 people).

**(6) Appearance (Apparent Naturalness):** Most of the area appears unmodified from major travel routes in Keku Strait and Sumner Strait, with the exception of areas beach logged in the 1960s. Trees have regenerated naturally in these harvest units. They do not dominate the landscape, but there is a difference in texture and color from the surrounding old-growth forest.

**(7) Surroundings (External Influences):** The Tebenkof Bay Wilderness and the Kuiu Wilderness lie to the west. To the north, road construction and timber harvesting have been extensive. Forest Road 6402, which connects Rowan Bay through the isthmus to Port Camden and Threemile Arm, was constructed about 1986. It has the potential to be extended into No Name Bay.

**(8) Attractions and Features of Special Interest:** The area includes all of Alvin, Reid, and No Name Bays, and Seclusion Harbor. Attractions in this area include the south-facing sand beaches in Reid and Alvin Bays. The presence of good anchorage sites within each of the bays and in Seclusion Harbor allows visitors to “boat camp” overnight. Seclusion Harbor-Salt Lagoon is a known sport fishing area for pink and chum salmon. The area contains 11 inventoried recreation places, which cover 6,417 acres, or 14 percent of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** Areas along the shore with older harvest units but no roads have been included in the roadless area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The majority of the area is essentially unmodified. Some evidence of human use is present at the abandoned fur farms on islands in this area, as well as past beach logging, although this is considered a very low impact on the overall natural integrity and apparent naturalness. The northern edge of the roadless area is influenced by roads and timber harvest.

**(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 East Kuiu Roadless Area, especially in the interior portion. Floatplanes and powerboats may disrupt visitors for brief periods. Present recreation and subsistence use levels are low compared to other areas on the Petersburg Ranger District. Persons camped along the shore are unlikely to encounter other recreationists, but may see or be seen by the occasional fishing boat offshore. There are two float houses within Seclusion Harbor.

Travel within the roadless area is moderately challenging. While there are some steep, rugged areas, there are also areas with gentle topography. 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 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) | 16,514 | 36% |
| Semi-Primitive Non-Motorized (SPNM) | 5,578 | 12% |
| Semi-Primitive Motorized (SPM) | 19,303 | 42% |
| Roaded Modified (RM) | 5,000 | 11% |

The area contains 11 inventoried recreation places, which cover 6,417 acres (14 percent) of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 1 | 5 |
| SPNM | 0 | 0 |
| SPM | 7 | 4,113 |
| RM | 4 | 2,301 |

* 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.

**(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 East Kuiu Roadless Area was given a rating of 26 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 also given a rating of 26.

**(4) Ecologic and Geologic Values:** Salt Lagoon-Seclusion Harbor has a unique combination of freshwater and saltwater, making it high value wildlife habitat. This is the only unique ecologic or geologic value in the area. The roadless area has well-defined boundaries, except for the northern edge, which is adjacent to a roaded area, and borders the Tebenkof Bay and Kuiu Wildernesses.

**(a) Fish Resources:** VCUs 416 and 419, adjacent to Threemile Arm, Alvin Bay, and Reid Bay, are rated as primary salmon producers. No VCUs were rated as primary sport fish producers (ADF&G, 1998).

This area has 16 ADF&G numbered salmon-producing streams. It is known to produce coho, pink, and chum salmon, cutthroat and steelhead trout, and Dolly Varden char. Other fish species, such as stickleback and sculpin, are also present. The best salmon producer may be the stream at the head of Seclusion Harbor, with estimated annual peak escapements of 21,800 pink and 1,425 chum salmon. Alvin Bay Creek has an estimated annual peak escapement of 40,000 pink salmon. Generally, sportfishing pressure in the area is low.

The headwaters of Alecks Creek are found in this area. Alecks Creek has high fish values for steelhead, coho, and sockeye salmon, and cutthroat trout. The pink salmon run averages 27,000 fish per year. The stream also supports chum salmon and Dolly Varden char. ADF&G lists this stream among the 65 important watersheds for salmon in Southeast Alaska. Alecks Creek and Lake meet the guidelines for Wild River classification for 3 miles. However, it was not recommended as Wild River in the 1997 Forest Plan ROD because the majority of the creek and lake watershed lie within the Tebenkof Bay Wilderness.

**(b) Wildlife Resources:** Salt Lagoon-Seclusion Harbor has a unique combination of freshwater and saltwater, making it valuable habitat for Sitka black-tailed deer, waterfowl, black bear, wolves, moose, furbearers, marine mammals, and bald eagles. This is also true for estuarine habitat found in Alvin Bay, Reid Bay, and at the head of Threemile Arm. Information from the Threemile Timber Sale EIS (USDA Forest Service, 2001) indicates that this area also supports habitat for trumpeter swan and Canada goose. Sea otters are expanding their range northward in Southeast Alaska, and use the marine waters along this roadless area from Port Beauclerc to Threemile Arm. Based on harvest data compiled from 1985 to 1995, one of the VCUs partially located in this area, VCU 419 surrounding Threemile Arm, 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 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, including 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 falcon nests have been found on the southwest portion of Kuiu Island. 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 Petersburg Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There is some karst in this roadless area, as well as calcareous soils derived from ancient coral reef deposits.

**(5) Scientific and Educational Values:** While the area provides opportunities for the study of forests, fish, wildlife, and geological processes, it is not readily accessible to scientists, students, or tourists.

**(6) Scenic Values:** Most of the landscape appears unmodified from major travel routes in Keku Strait and Sumner Strait. Viewing the area from saltwater use bays, the landscape has a natural appearance. Trees and other vegetation in areas beach logged in the 1960s have recovered to the extent that they no longer dominate the view.

Visual Priority Routes and Use Areas identified by the Forest Plan, that area within or adjacent to the area include: Keku Strait, a small boat route; Sumner Strait, a tour ship route; Three-mile Arm, Seclusion Harbor, No Name Bay, Alvin Bay, and Reid Bay, which are all saltwater use areas.

Ten percent of this roadless area is inventoried Variety Class A (possessing landscape diversity that is unique for the character type), 75 percent is inventoried Variety Class B (possessing landscape diversity that is common for the character type), and the remaining 14 percent is inventoried Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, 75 percent, is in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. One percent of the area appears to be untouched by human activity and is in EVC Type II. About 1 percent of the area is in EVC Type IV, where changes in the landscape are easily noticed by the average person and may attract some attention. They appear to be disturbances but resemble natural patterns. Twenty-two percent is 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:** The area is in the traditional territory of both the Kake and Kuiu Tlingit. Numerous cultural resource inventories in the area have identified a variety of sites, including villages, camps, gardens, fish traps, petroglyphs, and culturally modified trees. In 1793, Captain Vancouver ended his first explorations in Southeast Alaska at Conclusion Island. Historic period sites in the area include fur farms and cabins. This area was part of the Alaska Pulp Corporation long-term timber sale area. The bays provide subsistence resources for residents of Point Baker, Port Protection, and Kake. None of the VCUs included in the roadless area were rated as having the highest community fish and wildlife values. One, VCU 416 surrounding Alvin Bay and Reid Bay, was listed among the VCUs 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). These resources include deer, crab, fish, shellfish, and seaweed. There is also a float residence in Seclusion Harbor.

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The northern boundary is the roaded portion of Threemile Arm. The roadless area borders the Tebenkof Bay Wilderness and the Kuiu Wilderness on the west and south. The Keku and Sumner Straits are on the eastern boundary. The roadless area could be added to the two existing wildernesses; however, dropping the north-facing slopes along Threemile Arm (in VCU 419) would result in a more well-defined boundary. Dropping this portion of VCU 419 included in the roadless area would create a more manageable boundary separated from roaded and logged areas by a topographic break.

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

**(1) Recreation, Including Tourism Potential:** Recreation potential for East Kuiu is moderate. There is potential for additional outfitter/guide permits. In 1996 the Alaska Visitor Association (AVA) suggested a recreation development in the Salt Lagoon area. The development included a leased proprietary camp for 15 camp units and an overnight wildlife observatory with capacity for 50 people.

**(2) Subsistence Uses:** Designation as a wilderness would not affect current subsistence uses.

**(3) Fish Resources:** No fish habitat enhancement projects are currently planned for this area.

**(4) Wildlife Resources:** No wildlife habitat improvement projects are currently planned for this area.

**(5) Timber Resources:** There are approximately 29,517 acres mapped as productive old growth in the roadless area. In addition, there are 955 acres of second growth. Of this, approximately 20,711 acres are characterized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 7,656 acres or 17 percent of this roadless area are estimated to be suitable for timber production. Approximately 5,601 of the suitable acres are mapped as high-volume old growth; of these acres, 642 are mapped as high-volume, coarse-canopy old growth.

Second growth is primarily located in small patches that were beach logged in the 1960s along the shores of Reid Bay, No Name Bay, and Alvin Bay. The proposed Threemile Timber Harvest FEIS and ROD are expected to be published early in 2003. No timber harvest or road building is anticipated in this roadless area. This roaded area is adjacent to the northern boundary of the 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:** There are no inventoried areas with high mineral development potential in the area. There are no valid mining claims.

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

**(9) Water Availability and Use:** No developed recreation cabins or other facilities exist to create a water demand. There are no existing hydroelectric or domestic water projects in the area. There is an application for a domestic waterline permit, but no action has been taken as of spring 2002.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** Forest Service records show that one outfitter/guide used this area in 2000 for 60 service days for camping.

**(12) Land Status:** The roadless area is entirely National Forest System land. About 3,300 acres of land surrounding No Name Bay have been selected by the State of Alaska, but have not been conveyed.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Residents of Point Baker/Port Protection use the area for subsistence crabbing and shellfish harvesting. There is a fair level of public resistance to developing a road system into No Name Bay.

**(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 bill did not include this roadless area. In 2001, HR 2908 proposed that most of the roadless area be designated as part of the proposed Tebenkof Bay-Kuiu Island Wilderness. It did not include Sumner and Conclusion Islands. These islands would continue to be managed in an unroaded condition as LUD II under the bill.

**(c) Public Input During Forest Plan Revision and Appeals:** The Kake Tribal Council stated that they were against logging in the area because of the impact that it would have on subsistence and fishing. They commented that Seclusion Harbor had a unique inner bay bordered by meadows that was highly important to the people of Kake for subsistence. The Point Baker Community Council wanted East Kuiu allocated to Old-growth Habitat LUD or Primitive Recreation LUD to protect fishing, hunting, the migratory flyway and wintering habitat for waterfowl, and marbled murrelet concentrations. The timber industry wanted the area allocated to the Timber Production LUD. The Narrows Conservation Coalition and the Sitka Conservation Society opposed logging because of the effects on primitive recreation, scenic quality, subsistence uses, fish and wildlife, salmon, and landslide prone areas. Others wanted the area preserved as wilderness or managed to maintain high-quality sport fishing experience. One commenter wanted the area managed as a mineral LUD. The AVA suggested a leased proprietary camp with 15 camp units and an overnight wildlife observatory with capacity for 50 people for Salt Lagoon.

**(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 Forest Plan revision appeals. However, some commenters wanted all unroaded lands on the Tongass to be protected from development, while others wanted the current level of development to continue.

**(e) Public Input Expressed for Project-level EISs and Other Input:** Comments were received on the Threemile EIS. The U.S. Fish and Wildlife Service felt that no decision should be made until the roadless issue is decided at the national level. The Sitka Conservation Society, the Juneau Group of the Sierra Club, the Cascadia Wildlands Project, and others supported this position. The Sitka Conservation Society also stated that the East Kuiu Roadless Area borders two existing wilderness areas and the Threemile DEIS says that road building would be challenging due to landforms. The Alaska Rainforest Campaign felt that the area should be protected under the national Roadless Area Conservation Policy. The Southeast Alaska Conservation Council wanted roadless areas properly evaluated prior to any road building or harvest. They also stated that the area is important for subsistence uses. Others stated that the area is valuable habitat for waterfowl, black bears, furbearers, marine mammals, and bald eagles. In addition, they stated that subsistence use would be harmed by roads and timber harvest, including the cultural and spiritual value of participating in traditional subsistence harvests in old-growth forests.

**(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 that among the remaining, undeveloped areas left on Kuiu Island, three areas offer outstanding fish and wildlife habitat that should be protected. These include Bay of Pillars, Camden, and East Kuiu. Protection of this area, particularly in combination with the Bay of Pillars (#244) and Tebenkof Bay Wilderness Area, would conserve valuable remaining undisturbed, forested habitats on the island. They expressed 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 East Kuiu Island (RA# 245). 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 East Kuiu Island in their comments on the Draft SEIS.

ADF&G rated the East Kuiu roadless area as the sixth highest priority for protection in the Stikine Area. 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 Petersburg said they were opposed to designation of this area as wilderness because of the potential long-term economic effects 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.

The City of Kupreanof recommended East Kuiu for permanent protection as wilderness.

The Organized Village of Kake passed a resolution requesting that “customary and traditional areas such as … East Kuiu (VCUs 416-418, 4051)… be recommended for long-term protection.

Audubon Alaska recommended that East Kuiu Island should be protected from logging and road building.

SEACC recommended that the Bay of Pillars, East Kuiu, and South Kuiu roadless areas be designated wilderness and added to the existing Tebenkof Bay and Kuiu Wilderness. This combination would create a contiguous wilderness of approximately 265,000 acres. The Alaska Rainforest Campaign (a coalition of

national and Alaska conservation groups) identified Roadless Areas 244, 245, and 246 as adjacent to the existing Tebenkof Bay Wilderness and Kuiu Wilderness and recommended them for permanent protection as wilderness. They indicated that this combination would create a contiguous wilderness area of approximately 265,000 acres.

One commenter recommended Seclusion Bay should be protected. Many individual commenters recommended protection for all of East Kuiu.

**(2) Nearby Roadless and Wilderness Areas and Uses:** This area adjoins the Tebenkof Bay Wilderness on the west, Kuiu Wilderness to the west and south, and the Bay of Pillars Roadless Area to the northwest.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 120 | 130 |
| Petersburg (Pop. 3,224) | 40 | 55 |
| Wrangell (Pop. 2,308) | 55 | 60 |
| Ketchikan (Pop. 14,070) | 105 | 120 |

Kake and Petersburg are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The East Kuiu Roadless Area is adjacent to the eastern border of the Tebenkof Bay Wilderness and the Kuiu Wilderness on Kuiu Island, and borders the Sumner and Keku Straits. Landforms in the roadless area are characterized by gently rolling hills that are typically short, extremely broken and benched, making development of a road system challenging. Steeper slopes are forested, intermixed with scrub timber on gently sloping hills and benches. The highest point is 1,885 feet above sea level.

The area is mostly unmodified. The natural integrity is outstanding and the apparent naturalness is very high. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

Approximately 10 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The area has important cultural and historic values.

The roadless area includes about 19,241 acres of high-volume, old-growth forest. Of these acres, 3,075 are mapped as high-volume, coarse-canopy old growth.

The East Kuiu Roadless Area is classified as being in the Kuiu Island Biogeographic Province and makes about 9 percent of the province. It is one of eight inventoried roadless areas found within the province that collectively make up about 53 percent of the province. The Tebenkof Bay and the Kuiu Wildernesses are located in this province and makes up about 26 percent of the province. The province also includes the Sumner, Conclusion, and associated islands LUD II area, which makes up about 1 percent of the province.

The East Kuiu Roadless Area lies within two ecological sections; it represents 3 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section and 1 percent of the Kupreanof Lowlands 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. Approximatley 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.

Half (51 percent) of the roadless area is in the Alvin Bay Sediments Ecological Subsection; this portion of the roadless area represents 29 percent of the entire ecological subsection, 53 percent of which is in existing wilderness and 25 percent is protected by existing non-development LUDs. The Kuiu-Prince of Wales Granitics Ecological Subsection accounts for 16 percent of the roadless area, representing 5 percent of the entire ecological subsection. Within the Kuiu-Prince of Wales Granitics Ecological Subsection, 19 percent is protected in existing wilderness, 23

percent in existing LUD II, and 36 percent in existing non-development LUDs. Six percent of the roadless area is in the Affleck Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents 5 percent of the entire ecological subsection. Approximately 38 percent of this ecological subsection is protected by existing wilderness, 2 percent in existing LUD II, and 60 percent is in existing non-development LUDs. The balance (27 percent) of the roadless area is in the Sumner Strait Volcanics Ecological Subsection. This portion of the roadless area represents 4 percent of the entire ecological subsection, minor portions of which are protected by existing wilderness and LUD II (0.1 percent and 1 percent, respectively), and by other existing non-development LUDs (32 percent).

The East Kuiu Roadless Area was rated 26 out of a possible 28 points under the 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 both local and national support for managing the area in an unroaded condition, and support for designating the area as wilderness. Designation would create a wilderness with important cultural, historic, and old growth values. Designation of the area would add Congressional protection to about 4 percent of the Sumner Strait Volcanics Ecological Subsection that currently has only about 1 percent in wilderness or LUD II. It would also expand the Tebenkof Bay and Kuiu Wildernesses to the east. 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 East Kuiu Roadless Area would be managed under the existing Forest Plan if Alternative 1 or 4 is implemented. Approximately 36 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 64 percent. The land in the development LUDs provides an estimated 7,656 acres that are suitable for timber production (5 percent of the suitable acres on the Petersburg Ranger District). Approximately 642 of the suitable acres are identified as high-volume, coarse-canopy old growth. The timber sales, recreation, minerals, and special use programs would continue. The values associated with natural settings of the area could be affected by developments allowed under the Forest Plan. The cultural, historic, and most scenic and old growth values are protected under the Forest Plan.

Under Alternative 2, a 3,071-acre portion of the area in LUD II would be converted to Recommended Wilderness. This would not affect timber sale projects because this area is currently protected under LUD II designation. The total area suitable for timber production would not change from Alternative 1. The recreation, mineral, and special use 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 natural settings of the LUD II area would continue to be provided long-term protection if designated wilderness. Effects on natural setting values are basically the same as Alternative 1 and 4.

Under Alternative 5, a 41,598-acre portion of the area in Remote Recreation, Old-growth Habitat, Semi-remote Recreation, LUD II, Wild/Scenic/Recreation River, and Timber Production LUDs would be converted to Recommended Wilderness. No timber sales would be allowed and the recreation, minerals, and special use programs could be restricted in the Recommended Wilderness area. Lands suitable for timber production would be reduced to approximately 480 acres. Mineral prospecting 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 a portion of the Sumner Strait Volcanics Ecological Subsection that currently has only about 1 percent in wilderness or LUD II. The values associated with the natural settings of the majority of the roadless area, including cultural, historic, old growth, and scenic values, would be provided long-term protection if designated wilderness.

Under Alternative 6, all of the roadless area outside LUD II would be converted to Recommended Wilderness. The entire roadless area would be managed under either LUD II or Recommended Wilderness. No timber sales would be allowed. The ongoing recreation, minerals, and special uses programs within the Recommended Wilderness area could be restricted. Mineral prospecting 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 4 percent of the Sumner Strait Volcanics Ecological Subsection that currently has only about 1 percent in wilderness or LUD II. 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.

Under Alternative 3, 7, or 8, the entire roadless area would be converted to Recommended Wilderness. No timber sales would be allowed and the ongoing recreation, minerals, and special uses programs could be restricted. Mineral prospecting 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 4 percent of the Sumner Strait Volcanics Ecological Subsection that currently has only about 1 percent in wilderness or LUD II. 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 245 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | 3,071 | 46,395 | | 41,598 | 43,324 | 46,395 | 46,395 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | 79 | 79 | | 79 | | | | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | 8,776 | 8,776 | | 8,776 | 1,215 | | | |
| Semi-remote Recreation | 4,785 | 4,785 | | 4,785 | 9 | | | |
| Recommended LUD II | | | | | | | | |
| LUD II | 3,071 | | | 3,071 | | 3,071 | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | 17,364 | 17,364 | | 17,364 | 1,671 | | | |
| Timber Production | 12,320 | 12,320 | | 12,320 | 1,902 | | | |
| **TOTAL** | **46,395** | **46,395** | **46,395** | **46,395** | **46,395** | **46,395** | **46,395** | **46,395** |
| Suitable Timber Lands | 7,656 | 7,656 | 0 | 7,656 | 480 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** South Kuiu (246)

**ACRES (NFS):** 63,063

**BIOGEOGRAPHIC PROVINCE:** Kuiu Island

**ECOLOGICAL SECTION:** Kuiu-Prince of Wales Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 27

### I. Overview and Description

**(1) Location and Access:** The South Kuiu Roadless Area is south of the Kuiu and Tebenkof Bay Wildernesses on Kuiu Island. The Coronation Island and Warren Island Wildernesses lie to the south, across Decision Passage. Chatham Strait lies to the west and Sumner Strait lies to the east. The roadless area is approximately 15 air miles west of Point Baker and 50 air miles southwest of Petersburg, which is served by the Alaska Marine Highway and daily jet service. It is accessed by boat or floatplane and several good anchorages can be found in the numerous bays and inlets. There are no sites suitable for landing wheeled aircraft. There is no ferry service to Kuiu Island. Access inland is by foot or helicopter. There is a trail that was once maintained by the Coast Guard from Cape Decision north to Port McArthur. The lower portion of the trail has recently been reconstructed.

**(2) History:** The area is in the traditional territory of the Kuiu Tlingit, who eventually settled in Klawock. Archaeological sites include villages, forts, camps, fish traps, and petroglyphs. Historic period sites include a cannery, fur farms, cabins, and a Coast Guard lighthouse at Cape Decision. The lighthouse and surrounding land may be conveyed to a private, non-profit corporation that maintains the lighthouse. There has been no timber harvest within the roadless area.

**(3) Geography and Topography:** Landform types within this area are varied and represent all of the geomorphic types found on Kuiu Island. Most of this roadless area lies within the Affleck Lowlands geophysical area. This geophysical area is characterized by broad, undulating lowlands and gently rolling hills. These are areas of low relief with only a few hills that are above 800 feet in elevation. Moderately sloping to steep forested hill slopes, most of which are adjacent to the beach, make up a minor portion of this landscape. The far western portion (VCU 410) lies in the Rowan Sedimentary Hills area to the north and in the Alvin Graywacke Hills to the south. The landscape in the north is characterized by long, smooth, forested hill slopes bisected by broad "U" shaped glacial valleys. Hill summits are well rounded and most are less than 2,000 feet in elevation. Broad undulating glacial valleys are typically ¼ to ¾ mile wide and are less than 400 feet in elevation. They are underlain with thick glacial till deposits. The south half of VCU 410 is characterized by a series of rolling hills, most of which are less than 1,500 feet in elevation. Hill slopes are typically short, broken and irregular in shape, with well-rounded summits typical of glaciated terrain. Glacial deposits are scattered throughout this landscape on the more gentle slopes from valley bottom to hilltops.

Bedrock lithology throughout this roadless area consists primarily of sedimentary rocks of the Bay of Pillars formation. Common rock types are graywackes and turbidites. These rocks are Silurian in age (400 to 440 million years old).

Stream density is relatively low for most of the area, 2.9 miles/1,000 acres. Watersheds are generally small, with many first and second order streams in glacial sediments. In the northwestern portion of the area, watersheds are relatively large, with main channels flowing through broad glacial valleys. Stream density is 3.7 miles/1,000 acres.

The area includes the southern half of Affleck Canal, the shores of which are heavily dissected with smaller bays and coves. Kell Bay, Table Bay, and Port McArthur are other major water features. Mount McArthur and Mount Howard, located in the southwest portion of this roadless area, rise sharply from saltwater to their summit peaks.

The area contains 195 miles of saltwater shoreline. Islands make up 417 acres, lakes make up 97 acres, alpine makes up 116 acres, and exposed rock makes up 500 acres.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. This roadless area is in the Kuiu Island Biogeographic Province. It is deeply dissected by water, creating several prominent peninsulas. This area displays much greater relief and landform variety than is typical of the province. The western portion of the area is subject to the severe windstorms. There are no unique or uncommon plant/soil associations or geologic formations in the roadless area.

Ecological Section/Subsection. The South Kuiu Roadless Area is contained entirely within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F) represented by four ecological subsections (see table below). The Affleck Canal Till Lowlands Ecological Subsection covers half the roadless area. It is restricted to the glacially exposed peninsulas and low coastal hills. Poorly drained soils and wetlands cover most of the area. Productive hemlock stands are found in mineral soil on hillsides. The Kuiu-Prince of Wales Granitics Ecological Subsection covers a quarter of the roadless area and is found on the west-side. It is typified by rugged mountaintops of igneous rock which rise above rounded peaks. The higher crests capture incoming precipitation which remains as snowpack much of the year. Moderately productive hemlock forests are found below the alpine zone. The Alvin Bay Sediments Ecological Subsection covers the remaining quarter. It includes sedimentary coastal lowlands and angular-sided hills with smooth summits, remnants of substantial glaciation. Well-drained, productive soils, found on upland slopes, are cloaked in forests of hemlock and hemlock-Alaska yellow cedar, while poorly drained soils and associated wetlands are found in coastal lowlands (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kuiu-Prince of Wales Fjordlands | Affleck Canal Till Lowlands | 51% |
| | Kuiu-Prince of Wales Granitics | 24% |
| | Alvin Bay Sediments | 23% |
| | Rowan Sediments | 2% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent material, including bedrock, colluvium, and glacial drift. In general, soils in the Affleck Lowlands geophysical area are dominantly poorly drained mineral soils and very poorly drained organic soils. Shallow to moderately deep, well-drained soils occupy the more sloping positions adjacent to the beaches.

Well-drained or moderately well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are very acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or extremely shallow and rocky soils.

**(c) Vegetation:** Muskeg/forested wetland complexes cover a good portion of the South Kuiu 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. Mixed conifer plant communities are interspersed on better-drained sites. Forested hill slopes are dominantly Sitka spruce/western hemlock, and more poorly drained slopes consist of western hemlock/Alaska-cedar plant communities. Subalpine plant communities occupy many of the hilltop positions but are not extensive. Alpine vegetation covers most areas above 2,000 feet. The vegetation in the Rowan Sedimentary Hills area is distinct from the rest of the roadless area. Nearly all of the well-drained hill slope positions in this geophysical area are occupied by the highly productive western hemlock/blueberry/shield fern plant associations. This plant community forms rather large, contiguous forested areas on these hill slope

positions. About 20 percent of this geophysical area is occupied by wetlands. Sitka Spruce plant communities are on some relatively narrow floodplain soils adjacent to major streams.

There are approximately 60,949 acres mapped as forest land of which 37,339 acres (61 percent) are mapped as productive old-growth forest. Of the productive old growth, 13,063 acres (35 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 2,382 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:** This large roadless area has 34 Alaska Department of Fish and Game (ADF&G) numbered salmon-producing streams. The area is a good producer of anadromous fish, supporting runs of pink, chum, and coho salmon. One of the best producing streams is at the head of Kell Bay in the northwestern portion of the roadless area.

**(e) Wildlife Resources:** The area displays the typical array of wildlife found on Kuiu Island, including black bears, Sitka black-tailed deer, wolves, furbearers, and waterfowl.

Other terrestrial mammals include bats, mink, muskrat, ermine, red squirrel, mice, shrews, and voles. There are occasional sightings of fisher and wolverine, but these are considered incidental species at the edge of their range.

Bird species include bald eagles, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, marbled murrelets, osprey, spruce grouse, ptarmigan, sandhill cranes, trumpeter swans, Canada geese, and great blue herons. Red-throated, Pacific, and common loons all occur around Kuiu Island. Several plover, yellowlegs, and sandpiper species occur mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller's jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson's thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Sea mammals known to inhabit the waters surrounding Kuiu Island are the Pacific white-sided dolphin, killer whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal. Sea otters occur in the western areas of Sumner Strait off southern Kupreanof Island and on both eastern and western shores of Kuiu Island. They are expanding their range northward into Keku Strait.

Amphibians known to occur on Kuiu Island include rough-skinned newt, western toad, and wood frog. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts. Wood frogs are found in most of the ecosystems found in Southeast Alaska except for marine, estuarine, and riverine.

**(5) Management Direction and Current Uses:** This roadless area was allocated to one Land Use Designation (LUD) under 1997 Tongass Land and Resource Management Plan. The one LUD assigned to this area is the Semi-remote Recreation non-development LUD.

| LUD | Acres |
|---|---|
| Semi-remote Recreation | 63,063 |

Recreation uses include black bear hunting; coho salmon, pink salmon, and steelhead fishing; sea kayaking; camping; marine wildlife viewing; beachcombing; viewing scenery; resort use; and viewing from marine waters. Two outfitter/guide permits were issued in 2000, which resulted in 156 service days of camping and 8 service days

of black bear hunting. The bays and coves are used for commercial and recreational fishing. The area is also used for subsistence hunting and fishing. The US Coast Guard (Coast Guard) maintains navigation aids in the area, and once maintained an access trail from Port McArthur to the Cape Decision Lighthouse for supplies. The Cape Decision Lighthouse Society, a non-profit Alaskan corporation, was awarded the stewardship of the Cape Decision Light Station and Lighthouse Reserve by the Coast Guard in 1997. They plan to maintain the lighthouse, the trail, and the surrounding areas for public recreational use. They plan to rent the lighthouse by the day, week, or by the month to groups of 6 to 10 people. The lighthouse is accessible by helicopter, float plane, or passenger boat.

**(6) Appearance (Apparent Naturalness):** With the exception of the lighthouse, the area appears unmodified from major travel routes in Chatham Strait and Sumner Strait.

**(7) Surroundings (External Influences):** Kuiu and Tebenkof Bay Wildernesses and East Kuiu Roadless Area lie north and adjacent to South Kuiu Roadless Area. The rest of the area is surrounded by saltwater. The Coronation Island and Warren Island Wildernesses lie to the south across Decision Passage. The Spanish Islands, which are part of the Coronation Wilderness, are less than 1 mile to the south. Occasional aircraft and marine traffic are present.

**(8) Attractions and Features of Special Interest:** The area includes numerous bays and inlets, which provide many anchorages, and beachcombing opportunities. Sport fishing guides and a limited number of outfitter/guides operate within the roadless area. The area contains 11 inventoried recreation places, which cover 4,175 acres (7 percent) of the roadless area. The presence of numerous anchorage sites throughout the area allows visitors to "boat camp" overnight. A non-profit Alaskan corporation was awarded the stewardship of the Cape Decision Light Station and Lighthouse Reserve by the Coast Guard in 1997. They plan to maintain the lighthouse, the trail that once ran north to Port McArthur, and the surrounding areas for public recreational use.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** Approximately 60,576 acres in the northern half of the roadless area were designated as the Kuiu Wilderness by the Tongass Timber Reform Act of 1990. There have been no other changes to the boundary since 1989.

## II. Capability for Management as Wilderness (including effects of wilderness designation on adjacent areas)

**(1) Natural Integrity and Apparent Naturalness:** The area is essentially unmodified and is highly suitable for wilderness classification.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude in the South Kuiu Roadless Area. Floatplanes and powerboats may only infrequently be seen or heard. Persons camped along the shore are generally unlikely to encounter other recreationists, but they might see the occasional fishing boat offshore.

The roadless area is extremely rugged and is difficult to cross. An old trail goes from Cape Decision to Port McArthur. The lower portion of the trail was recently maintained by the Cape Decision Lighthouse Society. 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 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) | 36,417 | 58% |
| Semi-Primitive Motorized (SPM) | 26,646 | 42% |

The area contains 11 inventoried recreation places, which cover 4,175 acres (7 percent) of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| P | 1 | 136 |
| SPM | 10 | 4,039 |

There are no developed recreation facilities at this time.

**(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 South Kuiu Roadless Area was given a rating of 28 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 27. The difference in the rating is due to a lower score for solitude because of increasing outfitter and guide use, and uses associated with the lighthouse and trail.

**(4) Ecologic and Geologic Values:** There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area. The roadless area could be added to the Kuiu and Tebenkof Bay Wildernesses, which lie to the north and, possibly, to other roadless areas on the island. This would create a larger wilderness.

**(a) Fish Resources:** No VCUs in this area have been listed as primary salmon producers or sport fish producers by the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998).

This large area has 34 ADF&G numbered salmon-producing streams. The general area is a good producer of anadromous fish, supporting runs of pink, chum, and coho salmon; steelhead and cutthroat trout; and Dolly Varden char. The best-producing stream in the roadless area is Kell Bay Creek, which has an escapement of 39,000 pink salmon and 600 chum salmon. All of the anadromous fish-bearing streams have runs of coho salmon.

**(b) Wildlife Resources:** The area displays the typical array of wildlife found on Kuiu Island, including black bears, Sitka black-tailed deer, wolves, furbearers and waterfowl. Sea otters occur in the western areas of Sumner Strait off southern Kupreanof Island and on both eastern and western shores of Kuiu Island. They are expanding their range northward into Keku Strait. The Peale's Peregrine Falcon is known to nest on the western side of this roadless area, and a northern goshawk nesting area is suspected in 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, including 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. Peale's peregrine falcon is known to nest on the western side of this roadless area, and a northern

goshawk nesting area is suspected in this area. In addition, 12 sensitive plant species are known or suspected to occur in the Petersburg 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; however, this area displays much greater relief and landform variety than is typical of the region.

**(5) Scientific and Educational Values:** There have been no unique scientific or educational values identified in the area.

**(6) Scenic Values:** The landscape in this area has a natural appearance. The roadless area includes gently rolling hills that are typically short, extremely broken and benched, in stark contrast to the sharply rising, heavily dissected mountain slopes. The area appears unmodified from visual priority areas, such as Chatham Strait and Sumner Strait.

Visual Priority Routes and Use Areas identified by the Forest Plan, that area within or adjacent to the area include Sumner and Chatham Strait, which are tour ship routes.

About 1 percent of this roadless area is inventoried Variety Class A (possessing landscape diversity that is unique for the character type). Most of the area, 91 percent, is inventoried Variety Class B (possessing landscape diversity that is common for the character type) and approximately 7 percent is inventoried Variety Class C (possessing a low degree of landscape diversity). Approximately 2 percent of the area was not inventoried.

Almost all of the roadless area, 98 percent, is in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. Approximately 1 percent of the area is EVC Type III, where changes in the landscape are noticed by the average forest visitor. The natural appearance of the landscape remains dominant. Approximately 2 percent of the area was not inventoried.

**(7) Social, Cultural, and Historical Values:** The area is in the traditional territory of the Kuiu Tlingit, who eventually settled in Klawock. Archaeological sites include villages, forts, camps, fish traps, and petroglyphs. Historic period sites include a cannery in Kell Bay, fur farms, cabins, and the Cape Decision Lighthouse. Two outfitter/guide permits were issued in 2000, which resulted in 156 service days of camping and 8 service days of black bear hunting. The bays and coves are used for commercial and recreational fishing. In the past, subsistence hunting and fishing were conducted by the former occupants of the old villages, camps, and cabins in the area. Subsistence use is currently limited due primarily to the difficult access to and within the area. No VCUs are listed among those with the highest community use value or among those with the highest sensitivity to disturbance of subsistence use areas.

The prime attraction in this area is the close proximity to the Kuiu and Tebenkof Bay Wildernesses and the combined primitive settings of the wilderness and the roadless area. The numerous bays, islets, and mountainous terrain provide ample opportunity for isolated, undeveloped forms of recreation.

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The South Kuiu Roadless Area is bounded to the north by the Kuiu Wilderness. Affleck Canal divides this area into two separate areas. The roadless area is large and the boundaries are well-defined. To the south, east, and west, it is bordered by saltwater. Due to the dissected terrain, it is highly unlikely that a road system would be developed within this area. The existing wilderness areas to the north would preclude the development of a road connecting this roadless area to another part of Kuiu Island. If the land within the Cape Decision Lighthouse Reserve is conveyed to a non-profit group, the southern boundary would change slightly.

## 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. While the roadless area is not close to any tourist hubs, some increase is expected. The recreation potential for South Kuiu is moderate. There is potential for additional outfitter and guide permits,

trails, cabins, and shelters. A non-profit Alaskan corporation was awarded the stewardship of the Cape Decision Light Station and Lighthouse Reserve by the Coast Guard in 1997. They plan to maintain the lighthouse, the trail that once ran north to Port McArthur, and the surrounding areas for recreational use by the public. They plan to rent the lighthouse by the day, week, or by the month to groups of 6 to 10 people. These plans should be compatible with wilderness designation. Wilderness designation would be compatible with dispersed recreation, but could conflict with some tourism development and may prevent use of helicopters for access.

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

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

**(4) Wildlife Resources:** No wildlife habitat improvement projects are planned in the area.

**(5) Timber Resources:** There are approximately 37,339 acres mapped as productive old growth and 56 acres mapped as second growth due to harvesting in the roadless area. Of these acres, 25,892 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 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 roadless area contains an estimated 40,388 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:** No transportation or utility corridors have been identified in the roadless area. Deep islets and broken terrain make development of a road system unfeasible.

**(9) Water Availability and Use:** If the lighthouse is developed as a guest house, it could create a domestic water need. There are no existing or planned hydroelectric projects in the area.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** Forest Service records show that two outfitter/guides used this area in 2000 for 156 service days for camping and 8 service days for black bear hunting. The Coast Guard is authorized to maintain communication facilities near Mt. McArthur.

**(12) Land Status:** The roadless area is entirely National Forest System land. The area near the Cape Decision Lighthouse, about 216 acres, was reserved for use by the Coast Guard for lighthouse purposes in 1921 and may be conveyed to a non-profit organization.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Residents of Point Baker/Port Protection use the area for subsistence crabbing and shellfish harvesting. The Cape Decision Lighthouse Society, a non-profit Alaskan corporation, was awarded the stewardship of the Cape Decision Light Station and Lighthouse. They have expressed an interest in renting the lighthouse to the public and managing the Cape Decision area for public recreational 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 included the South Kuiu Roadless Area as part of the South Kuiu Island Wilderness. The northern portion of the roadless area (approximately 60,576 acres) was designated as the Kuiu Wilderness by the Tongass Timber Reform Act

of 1990. In 2001, HR 2908 proposed that the roadless area be designated as part of the proposed Tebenkof Bay and Kuiu Wildernesses.

**(c) Public Input During Forest Plan Revision and Appeals:** Many comments specific to this area were received. The Wrangell Resource Council and the City of Port Alexander commented that all of South Kuiu is important for scenic quality, old-growth habitat, wildlife, and primitive recreation and should be maintained for those values. The Point Baker Community Council resolved that South Kuiu (VCUs 410, 411, and 414) should be allocated to the Old-growth Habitat LUD or the Primitive Recreation LUD due to its fishing and hunting values, its location along a migratory flyway, its value as wintering waterfowl habitat, and due to the occurrence of high concentrations of marbled murrelets in the area. The Sitka Conservation Society wanted VCUs 413 to 415 designated as LUD II and wanted VCUs 411 and 414 managed as Old-growth Habitat LUD. The Rainforest Campaign and the Southeast Alaska Conservation Council wanted the area managed as LUD II. The timber industry wanted the area managed for timber production. The Alaska Visitors Association wanted the area managed for developed recreation. Others recommended the strongest possible protection for the area. Some requested that there be no log transfer facilities developed. Others commented that the area should be managed to maintain a high-quality sport fishing experience. Others commented that the area should be managed as a mineral LUD. The Narrows Conservation Coalition, the Southeast Alaska Conservation Council, and the Kake Native community recommended that the area be managed to preserve its integrity. They felt that the area merits special protection because of outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values.

**(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 and 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:** There were no specific public comments on the roadless issue for this 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. They indicated that protection of this area, particularly because it adjoins Tebenkof Bay Wilderness Area, would conserve valuable remaining undisturbed forested habitats on the island.

The city of Petersburg said they were opposed to designation of this area as wilderness because of the potential long-term economic effects 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.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 244, 245, and 246 as adjacent to the existing Tebenkof Bay Wilderness and Kuiu Wilderness and recommended them for permanent protection as wilderness. They indicated that this combination would create a contiguous wilderness area of approximately 265,000 acres. SEACC recommended that the Bay of Pillars, East Kuiu, and South Kuiu roadless areas be designated wilderness and added to the existing Tebenkof Bay and Kuiu Wilderness. This combination would create a contiguous wilderness of approximately 265,000 acres.

Many individuals commented in favor of permanent protection for this area

**(2) Nearby Roadless and Wilderness Areas and Uses:** This area adjoins the Kuiu Wilderness. The Tebenkof Bay Wilderness, the East Kuiu Roadless Area, and the Bay of Pillars Roadless Area are north of the area. The Coronation Island and Warren Island Wildernesses lie to the south across Decision Passage.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 145 | 160 |
| Petersburg (Pop. 3,224) | 50 | 65 |
| Wrangell (Pop. 2,308) | 65 | 65 |
| Ketchikan (Pop. 14,070) | 105 | 125 |

Kake (approximately 42 miles to the north) and Petersburg are the nearest stops on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The South Kuiu Roadless Area is south of the Kuiu and Tebenkof Bay Wildernesses on Kuiu Island. The Coronation Island and Warren Island Wildernesses lie to the south, across Decision Passage. Chatham Strait lies to the west and Sumner Strait lies to the east. The roadless area occupies a large area on the southern portion of Kuiu Island. It is divided into two separate parts by Affleck Canal. Landforms within this area are varied and represent all geomorphic types found on Kuiu Island. Gently rolling hills that are typically short, extremely broken and benched, are in stark contrast to the sharply rising, heavily dissected mountain slopes to the north.

The area is mostly unmodified. The natural integrity and apparent naturalness is considered to be outstanding. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

Approximately 1 percent of the landscape is considered to be distinctive for the character type from a scenery standpoint. The area has important cultural, historic, and recreational values.

The roadless area includes about 13,063 acres of high-volume, old-growth forest. Of these acres, 2,382 are mapped as high-volume, coarse-canopy old growth.

The South Kuiu Roadless Area is classified as being in the Kuiu Island Biogeographic Province and makes about 13 percent of the province. It is 1 of 8 inventoried roadless areas found within the province that collectively make up about 53 percent of the province. The Tebenkof Bay and the Kuiu Wildernesses are located in this province and makes up about 26 percent of the province. The province also includes the Sumner, Conclusion, and associated islands LUD II area, which makes up about 1 percent of the province.

The South Kuiu Roadless Area lies completely within the Kuiu-Prince of Wales Fjordlands Ecological Section and represents 6 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.

Half (51 percent) of the roadless area is in the Affleck Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents 57 percent of the entire ecological subsection. Approximately 38 percent of this ecological subsection is protected by existing wilderness, 2 percent in existing LUD II, and 60 percent is in existing non-development LUDs. One-quarter (24 percent) of the roadless area is in the Kuiu-Prince of Wales Granitics Ecological Subsection; this portion of the roadless area represents 10 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. Twenty-three percent of the roadless area is in the Alvin Bay Sediments Ecological Subsection; this portion of the roadless area represents 18 percent of the entire ecological subsection, 53 percent of which is in existing wilderness and 25 percent is protected by existing non-development LUDs. The remaining 2 percent of the roadless area is in the Rowan Sediments Ecological Subsection; this portion of the roadless area represents 1 percent of the entire ecological subsection, 27 percent of which is in existing wilderness and 27 percent is protected by existing non-development LUDs.

The South Kuiu Roadless Area was rated 27 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 2nd from the highest (along with 2 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is local support for managing the area in an unroaded condition, and there is both local and national support for designating the area as wilderness. Designation would create a wilderness with important cultural, historic, and recreational values. It would also expand the Kuiu and Tebenkof Bay Wildernesses to the south. 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 South Kuiu Roadless Area would be managed under the existing Forest Plan if Alternative 1 or 2 is implemented. All of the roadless area would be managed under non-development LUDs. This area contains an estimated 40,388 acres of undiscovered locatable mineral resources; all of the 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 are protected by the Forest Plan.

Under Alternative 3, 4, 5, 6, 7, or 8, the entire roadless 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 total area suitable for timber production would not change from Alternative 1. The ongoing recreation, minerals, and special use 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, including cultural, 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 246 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | 63,063 | 63,063 | 63,063 | 63,063 | 63,063 | 63,063 |
| 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 | 63,063 | 63,063 | | | | | | |
| Recommended LUD II | | | | | | | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | | | | | | | | |
| **TOTAL** | **63,063** | **63,063** | **63,063** | **63,063** | **63,063** | **63,063** | **63,063** | **63,063** |
| Suitable Timber Lands | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** East Wrangell (247) – formerly part of 229

**ACRES (NFS):** 7,634

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity and Central Coast Range

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 17

### I. Overview and Description

**(1) Location and Access:** The area is located on the east side of Wrangell Island, approximately 15 miles southeast of the city of Wrangell, which is served by the Alaska Marine Highway and jet service. This area is separated from the mainland by The Narrows to the north and Blake Channel to the east. The 138 kV Tyee powerline forms the south boundary of the area. Forest roads and associated harvest areas form the remainder of the west boundary. The area is accessible from the surrounding saltwater and adjacent forest roads. There are no sites suitable for landing wheeled aircraft. Access into the interior is by foot or helicopter.

**(2) History:** The area was inhabited by the Tlingit in prehistoric and historic times. While the area has likely been prospected for minerals, there are no known mining claims. The 138 kV Tyee powerline that forms the south and part of the west boundary of the area was constructed in 1984.

**(3) Geography and Topography:** The northern portion of the area is generally characterized by a mountain ridge that reaches elevations of over 2,000 feet with a high point of 2,800 feet. The majority of the area is above 1,000 feet. Blake Creek flows through the valley south of the elevated northern portion of the area. Saltwater borders the area to the north and east. Freshwater lakes cover about 67 acres, alpine covers 45 acres, and rock occupies another 35 acres. The area includes approximately 13 miles of saltwater shoreline and 40 acres of small islands.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity and Central Coast Range Biogeographic Provinces. The Etolin Island province is generally subject to continental influence from the mainland and the Stikine River. Glacial flour is present in the marine environment in the northern part of this province nearly year-round. All forest plant associations, except those occurring only on outer coast areas, are present. The Central Coast Range has relatively gentle topography and the Stikine River system has a major continental influence and provides a migration corridor for plants and animals. Plant associations along the salt water are similar to those occurring elsewhere in Southeast Alaska.

Ecological Section/Subsection. The East Wrangell Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), represented by three ecological subsections (see table below). The majority of the East Wrangell Roadless Area, 87 percent, lies within the Eastern Passage Complex Ecological Subsection, which lies to the west of the Coast Range megalignment. The underlying geology is rugged sedimentary and volcanic formations, dissected by numerous streams, extending from Bradfield Canal to Thomas Bay. Mineral soils of sedimentary and plutonic origin dominate the subsection and organic soils are relatively common on poorly drained sites. The Bell Island Granitics Ecological Subsection, 9 percent of the roadless area, is characterized by rounded hills and narrow, glacially scoured valleys. Mountain slope soils are usually well-drained, mineral soil, while lowlands, lake margins, and wetlands are typically poorly drained soils. The Zimovia Strait Complex Ecological Subsection, 4 percent

of the roadless area, is composed of stratified sedimentary rock and volcanic intrusions lying beneath broad glacial valleys and rounded hills (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Eastern Passage Complex | 87% |
| | Bell Island Granitics | 9% |
| | Zimovia Strait Complex | 4% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or extremely shallow and rocky soils.

**(c) Vegetation:** Alpine vegetation dominates above 2,500 feet elevation. The valley floors and poorly drained areas between hills are generally covered with muskeg and scrub lodgepole pine. Steeper, well-drained hillsides support heavy stands of Sitka spruce, western hemlock, red cedar, and Alaska-cedar.

There are approximately 7,286 acres mapped as forestland, of which 4,999 acres or 69 percent are mapped as productive old-growth forest. Of the productive old growth, 2,634 acres or 53 percent are mapped as high-volume old-growth forest. The productive old growth includes about 304 acres of high-volume, coarse-canopy old growth. There are 34 acres mapped as second growth resulting from beach logging in prior years.

**(d) Fish Resources:** Blake Creek is a third-order watershed that contains fish habitat (primarily resident fish) and is considered moderately sensitive (USDA Forest Service, 1998). Blake Creek is classified as a Class I stream.

**(e) Wildlife Resources:** Important species include Sitka black-tailed deer, wolves, black bear, pine marten, and small populations of brown bear and moose.

**(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 Scenic Viewshed, Timber Production, and Old-growth Habitat.

| LUD | Acres |
|---|---|
| Scenic Viewshed | 3,981 |
| Timber Production | 2,314 |
| Old-growth Habitat | 1,339 |

Approximately 82 percent of the roadless area was allocated to development LUDs (Scenic Viewshed, Timber Production). The higher elevation area located in the northern part of the area was allocated to the Scenic Viewshed LUD, which account for approximately 52 percent of the roadless area. The Timber Production LUD was assigned to approximately 30 percent of the roadless area. This LUD is located in the lower elevation areas on the west side of the main mountain ridge in this area.

Approximately 18 percent of the area was allocated to one non-development LUD, Old-growth Habitat. This LUD is a part of the Blake Old-Growth Reserve located on the east side of the mountain ridge.

Present recreation use levels are low except at streams and lakes near the roads and occasionally at the mouths of some streams. The shoreline along Blake Channel is mostly rocky and receives little recreation use. The Wildlife Analysis Area that includes this roadless area accounted for 5 to 10 percent of annual average Wrangell deer harvest during 1987 to 1994.

The 138 kV Tyee powerline was constructed in 1984 and borders the southern edge of the roadless area.

This area includes portions of two timber sales proposed in the 1998 Wrangell Island Analysis (USDA Forest Service, 1998). The Highbush Timber Sale project area extends from the west border of the area to the boundary of the Blake Old-Growth Reserve. The Blake Timber Sale area is located in the southern portion of the area, south of the Blake Old-Growth Reserve. The Tongass National Forest 10-year action plan schedules the small Shady/Highbush Timber Sale, which includes the area, for 2004.

**(6) Appearance (Apparent Naturalness):** Overall, the area has high scenic quality with a natural appearing landscape and provides scenery from surrounding land and saltwater areas, including Blake Channel.

**(7) Surroundings (External Influences):** The area is separated from the mainland by The Narrows to the north and Blake Channel to the east. The Tyee powerline forms the south and part of the west boundary of the area. Forest roads and associated harvest areas form the remainder of the west boundary. Timber sales are planned for portions of the roadless areas west of the East Wrangell Roadless Area (USDA Forest Service, 2001). The proposed Madan Timber Sale project area is located on the mainland immediately north across The Narrows from the East Wrangell Roadless Area. Boats traveling the waters of Blake Channel and The Narrows may be visible from within parts of the area, but usually are not intrusive. It is possible to see harvested areas, as well as the Tyee powerline, from some locations within this roadless area.

**(8) Attractions and Features of Special Interest:** There are no identified unique or special features in this area. There is an improved trail located just outside the roadless area that leads to Highbush Lake, which is within the roadless area. The area contains five inventoried recreation places, which cover 343 acres, or 4 percent of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The East Wrangell Roadless Area did not exist in 1989. At that time it was part of the South Wrangell Roadless Area. Development activities between 1989 and 1996 separated the 1989 South Wrangell Roadless Area into five separate roadless areas.

## II. Capability of Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is essentially unmodified. Approximately 88 percent of the area is natural appearing, where only ecological and geological change has occurred. The Tyee powerline forms the southern boundary of the area.

**(2) Opportunity for Solitude, Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a low opportunity for solitude within the area. Present recreation use is low due to a lack of road access and poor boat anchorages. Generally, a person camped or traveling inland is likely to see others only occasionally.

Travel within the area is not especially challenging, requiring only moderate woods skills and experience. The presence of both black and brown bears, especially around salmon streams in the fall, does present a degree of challenge and a need for caution.

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) | 4,513 | 59% |
| Semi-Primitive Motorized (SPM) | 1,280 | 17% |
| Roaded Natural (RN) | 1,226 | 16% |
| Roaded Modified (RM) | 616 | 8% |

The area contains five inventoried recreation places, which cover 343 acres, or 4 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| SPNM | 0 | 0 |
| SPM | 1 | 171 |
| RN | 1 | 40 |
| RM | 4 | 132 |

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

The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the community of Wrangell in about 1 hour, and from Ketchikan in approximately 7 hours. Access on land is by road (28 miles) from the city of Wrangell.

**(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 South Wrangell Roadless Area was given a rating of 20 out of 28 possible points; the East Wrangell Roadless Area represented only a portion of that area. The rating was re-evaluated for this updated version of the Analysis of the Management Situation. Based on this re-evaluation, the East Wrangell Roadless Area was given a rating of 17. This rating reflects the effects of developments in adjacent areas on wilderness attributes of this relatively small roadless area.

**(4) Ecologic and Geologic Values:** The majority of the roadless area is forested with areas of higher volume old-growth forest concentrated along the lower elevation areas. There are no known unique features in the area.

**(a) Fish Resources:** None of the VCUs are listed as primary salmon or sport fish producers (ADF&G, 1998).

Blake Creek, which flows through the valley south of the elevated northern portion of the area, is classified as a Class I stream.

Highbush Lake, located on the west edge of the roadless area, is easily accessible from the road system and has a fishable trout population.

According to the Wrangell Island Analysis Report (USDA Forest Service, 1998), this roadless area includes one third order watershed (Blake Creek) and portions of another (Earl Creek). Blake Creek is one of four unroaded third order watersheds on the island. The most important riparian zones on the island are associated with very low gradient floodplain stream channels found in watersheds, such as the Earl Creek watershed. Fish species on the island include steelhead, rainbow, and native cutthroat trout; Dolly Varden char; chum, pink, coho, and sockeye salmon (USDA Forest Service, 1998).

**(b) Wildlife Resources:** Important species include Sitka black-tailed deer, wolves, black bear, pine marten, and small populations of brown bear and moose. Most high value old-growth habitat is along the

north end of the area and along the beach. Wrangell Island is also known to support brown bears, unlike many of the outer coast islands. Mountain lions and wolverine have also been reported on the island. High value marten habitat generally occurs along the beach (USDA Forest Service, 1998). Wrangell Island also supports an endemic species, the Wrangell red-backed vole. Old-growth spruce-hemlock forests provide the vegetative structure preferred by nesting goshawks.

**(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, including 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 Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources**: There are no known karst and cave resources in the area.

**(5) Scientific and Educational Values:** There are opportunities to observe and study fish and wildlife and the various forces that formed the landscape. The area is located approximately 12 air and 25 water miles from the city of Wrangell and is, therefore, relatively accessible to school-age children.

**(6) Scenic Values:** The majority of the area appears unmodified. The Tyee powerline forms the south boundary of the area. Forest roads and associated harvested areas form the remainder of the west boundary. The powerline is well located to minimize its visibility from the water but is visible from locations within this roadless area. Harvested areas are also visible from some parts of the roadless area. Blake Channel is the most popular route to the Anan Wildlife Observatory and also a secondary ferry and small cruise ship route. As a result, the hillslopes seen from the channel have high scenic values.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Blake Channel, which is used by tour ships.

About 8 percent of the roadless area is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type). Most of the area, approximately 92 percent, is inventoried as Variety Class B (possessing landscape diversity that is common for the character type).

The majority of this roadless area, approximately 75 percent, has an Existing Visual Condition (EVC) Type I, where only ecological change occurs on the landscape. Two percent of this roadless area is EVC Type III, where changes in the landscape are seen by the average forest visitor, but the natural appearance remains dominant. Twenty-two percent is 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:** This area is located approximately 1 hour by boat and 1 hour (28 miles) by automobile from Wrangell, which is the closest community. Wrangell is also the closest stop on the Alaska Marine Highway. There is an improved trail located just outside the roadless area that leads to Highbush Lake, which is within the roadless area. The lake has a public-use rowboat that people can use for fishing or boating around the lake. Present recreation use within the area is low due to a lack of road access and poor boat anchorages along the shoreline.

The Wildlife Analysis Area that includes this roadless area accounted for 5 to 10 percent of annual average Wrangell deer harvest during 1987 to 1994. Higher average numbers of deer are harvested from nearby Etolin and Zarembo Islands (USDA Forest Service, 1998). The VCUs in this area were not included among the VCUs with

highest community use value. Only VCU 505, along Blake Channel, was listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998)

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is well defined by saltwater on the east, north, and part of its west boundaries. The area is, however, irregularly shaped because the Tyee powerline forms the south boundary of the area. The remainder of the west boundary is formed by forest roads and associated harvest units. As a result, the current boundaries of the East Wrangell Roadless Area do not conform to natural landscape features. Defining a wilderness unit based on the Blake landscape unit might enhance the wilderness characteristics of the area. However, the Blake landscape unit is divided by the Tyee powerline with the west portion of the unit contained within the Southeast Wrangell Roadless Area.

Much of the south central portion of Wrangell Island, located west of the East Wrangell Roadless Area was allocated to the Timber Production LUD. Other parts of the island were allocated to the Old-growth Reserve, Modified Landscape, and Scenic Viewshed LUDs. The proposed Madan Timber Sale project area is located on the mainland immediately north across The Narrows from the East Wrangell Roadless Area. The land in and around the proposed Madan Timber Sale project area was allocated primarily to the Scenic Viewshed and Old-growth Reserve LUDs, with some land allocated to the Timber Production and Modified Landscape LUDs further inland. The area located on the mainland immediately east across Blake Channel from the East Wrangell Roadless Area was allocated to the Semi-remote Recreation LUD, with a small area to the south allocated to the Scenic Viewshed LUD.

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

**(1) Recreation, Including Tourism Potential:** The recreation potential in this area is currently limited by a lack of road access and poor boat anchorages (USDA Forest Service, 1998). Forest roads do, however, extend to the west boundary of the 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:** No fish habitat enhancement projects have been identified for this area, however, there may be potential to enhance the trout fishery in Highbush Lake.

**(4) Wildlife Resources:** There are opportunities for moose habitat improvement projects in the area. These projects typically consist of browse enhancement involving seeding, planting, and releasing.

**(5) Timber Resources:** There are approximately 4,999 acres mapped as productive old growth and 34 acres mapped as second growth in the roadless area. Of these acres, 3,152 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), 1,241 acres (16 percent) of this roadless area are estimated to be suitable for timber production. Approximately 694 of the suitable acres are mapped as high-volume old growth; of these acres, 62 are mapped as high-volume, coarse-canopy old growth. Some areas are highly prone to strong winds that blow down standing timber left exposed by cutting adjacent stands. The potential for managing timber in this roadless area is high, as roads could be extended from the existing system and the area could be logged without constructing a camp or additional log transfer facilities.

The area includes portions of two timber sales proposed in the 1998 Wrangell Island Analysis (USDA Forest Service, 1998). The Highbush Timber Sale project area extends from the west border of the area to the boundary of the Blake Old-Growth Reserve. The Blake Timber Sale area is located in the southern portion of the area, south of the Blake Old-Growth Reserve. The Tongass National Forest 10-year action plan schedules the small Shady/Highbush Timber Sale, which includes the area, for 2004.

**(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 known current claims in this area. This area contains an estimated 45 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:** The March 1999 Southeast Alaska Transportation Plan proposed implementation of a new shuttle-ferry and road system, referred to as the *Inside Passage Highway*, connecting Petersburg, Wrangell, and Ketchikan. Proposed road improvements on Wrangell Island include upgrading Forest Road 6265 and Fools Inlet Road, as well as constructing 3 miles of new roadway to a new ferry terminal at Fools Inlet. These proposed improvements would be located several miles west of the East Wrangell Roadless Area. There are no proposed transportation or new utility corridors within the roadless area. New local roads are likely to be proposed in LUDs that allow timber management activities.

**(9) Water Availability and Use:** There are no existing or planned hydropower or domestic water projects in the area.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas, and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** The Tyee powerline that forms the south boundary of the area is under special use permit. This permit is not within the roadless area.

**(12) Land Status:** The roadless area is entirely National Forest System land, though the state has selected land around Earl West Cove, including a portion of the west end of this roadless area.

## IV. Wilderness Evaluation (Need for Wilderness)

### (1) Public and Congressional Interest

**(a) Interest Expressed by Local Users and Residents:** There have been no local initiatives or public sentiment expressed to have the area remain roadless. There has been interest by some residents of Wrangell in developing additional roads in the unroaded portions of Wrangell Island to facilitate additional timber harvest and roaded recreation opportunities (USDA Forest Service, 1990).

**(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. The Southeast Alaska Conservation Council included the Wrangell Narrows and Blake Channel in their 1991 list of areas that merited special management protection because of their outstanding wildlife, fisheries, hunting, fishing, subsistence, recreation, and tourism values. Another party noted that the scenic quality of the Wrangell Narrows should be preserved.

The Wrangell Resource Council recommended that Wrangell Island be allocated to the Primitive Recreation LUD. Timber industry comments recommended that Management Area S25, which includes most of the East Wrangell Roadless Area, be allocated to the Timber Production LUD. Other timber industry comments recommended that with the exception of some Scenic Viewshed or Modified Landscape along the ferry route, all of Management Area S25 should be allocated to the Timber Production LUD to keep timber harvest economic in these already-developed areas.

**(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 summary of public comments presented in the Wrangell Island Analysis (USDA Forest Service, 1998) did not include a desire by the public to have the area remain roadless or be designated wilderness. Many of the issues raised concerned recreation, with local residents citing the need for more hiking trails, winter recreation opportunities (snowmobiling and skiing), cabins and shelters on the island, and recreational driving/camping opportunities. Some people would like to have primitive campsites designated near beaches around the island. The summary of comments presented in the Wrangell Island Analysis suggested that local residents generally consider timber and recreation to be compatible on Wrangell Island, with people generally wanting to keep logging roads open for public use. The summary also noted increasing public concern about the cumulative effects of timber harvest, road building, and recreation development on wildlife habitat (USDA Forest Service, 1998).

**(f) Public Input Expressed During Supplemental EIS Process:** SEACC recommended the remaining roadless areas on Wrangell Island be designated LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 247 for permanent protection as LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Southeast Wrangell Roadless Area is located south and west of this area. These two areas are separated by the Tyee powerline and associated right-of-way. The Central, South, and West Wrangell Roadless Areas are located to the west, separated from one another by existing roads and harvest units. Present recreation use levels are low in these areas except around Fools Inlet, at streams and lakes near the roads, and occasionally at the mouths of some streams. Subsistence use in the Wildlife Analysis Area that includes South Wrangell Island accounted for 5 to 10 percent of average annual deer harvest from 1987 to 1994.

The Madan Roadless Area is located directly north across The Narrows. The proposed Madan Timber Sale extends to the shoreline of that area. The Aaron and Harding Roadless Areas are located east across Blake Channel from the East Wrangell Roadless Area.

The nearest wilderness is the Stikine-LeConte, approximately 10 miles to the north. The South Etolin Wilderness is located about 12 miles southwest of the East Wrangell Roadless Area. The area currently receives light to moderate use inland, away from saltwater or road access.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 60 | 85 |
| Wrangell (Pop. 2,308) | 15 | 20 |
| Petersburg (Pop. 3,224) | 45 | 45 |
| Juneau (Pop. 30,711) | 160 | 165 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The East Wrangell Roadless Area is located on the east side of Wrangell Island. This area is separated from the mainland by The Narrows to the north and Blake Channel to the east. The 138 kV Tyee powerline forms the south boundary of the area. Forest roads and associated harvest areas form the remainder of the west boundary. The northern portion of the roadless area is generally characterized by a mountain ridge that reaches elevations of over 2,000 feet with a high point of 2,798 feet. The majority of the area is above 1,000 feet. Blake Creek flows through the valley south of the elevated northern portion of the area. Saltwater borders the area to the north and east.

The area is heavily influenced by developments and activities on adjacent lands. The natural integrity of the area is high and the apparent naturalness is moderate. The opportunity for solitude is low and the opportunity for primitive recreation is relatively high.

Approximately 8 percent of the landscape is considered distinctive for the character type from a scenery standpoint. There are no other significant or unique features in this area.

The roadless area includes about 2,634 acres of high-volume, old-growth forest. Of these acres, 304 are mapped as high-volume, coarse-canopy old growth.

The East Wrangell Roadless Area is classified as being in the Etolin Island and Vicinity and in the Central Coast Range Biogeographic Provinces. Approximately 58 percent of the roadless area is in Etolin Island and Vicinity province and makes up about 1 percent of the province. It is one of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province. Approximately 42 percent of the roadless area is in the Central Coast Range province and makes less than one percent of that province. It is one of nine inventoried roadless areas found in the province that collectively make up about 59 percent of the province. Portions of the Stikine-LeConte Wilderness lie within the Central Coast Range province and make up about 38 percent of the province.

The East Wrangell 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.

The majority (87 percent) of the roadless area is in the Eastern Passage Complex Ecological Subsection; this portion of the roadless area represents 3 percent of the entire ecological subsection. Approximately 23 percent of this ecological subsection is in existing wilderness, 3 percent is in existing LUD II, and an additional 29 percent is protected by other existing non-development LUDs. Nine percent of the roadless area is in the Bell Island Granitics Ecological Subsection; this portion of the roadless area represents 0.3 percent of the entire ecological subsection, of which14 percent is in existing wilderness, 9 percent in LUD II, and is well represented by other existing non-development LUDs (57 percent). The balance (4 percent) of the roadless area is in the Zimovia Strait Complex Ecological Subsection; this portion of the roadless area represents 0.2 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 East Wrangell Roadless Area was rated 17 out of a possible 28 points under the WARS. As such, its WARS rating is ranked 93rd from the highest (along with 4 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for management of the area in an unroaded condition, and little support for designating the area as wilderness. Designation would create a wilderness that has few features that are considered unique or significant from a wilderness perspective. 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 East Wrangell Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 18 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 82 percent. The land in the development LUDs provides an estimated 1,241 acres that are suitable for timber production (1 percent of the suitable acres on the Wrangell Ranger District). Approximately 62 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 45 acres of undiscovered locatable mineral resources; all of the acres are considered to have low potential for development. The timber sales, 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 allowed by the Forest Plan. The scenic values would be mostly protected by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use 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 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. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses 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, including scenic values, would be provided long-term protection if designated wilderness.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 247 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 7,634 |
| 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 | 1,339 | 1,339 | 1,339 | 1,339 | 1,339 | | 1,339 | |
| Semi-remote Recreation | | | | | | | | |
| Recommended LUD II | | | | | | 7,634 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | | 3,981 | |
| Modified Landscape | | | | | | | | |
| Timber Production | 2,314 | 2,314 | 2,314 | 2,314 | 2,314 | | 2,314 | |
| **TOTAL** | **7,634** | **7,634** | **7,634** | **7,634** | **7,634** | **7,634** | **7,634** | **7,634** |
| Suitable Timber Lands | 1,241 | 1,241 | 1,241 | 1,241 | 1,241 | 0 | 1,241 | 0 |

# Appendix C

**INDIVIDUAL ROADLESS AREA DESCRIPTION**

**ROADLESS AREA NAME:** Central Wrangell (289)

**ACRES (NFS):** 15,210

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 16

## I. Overview and Description

**(1) Location and Access:** The area is centrally located on south Wrangell Island, approximately 10 miles south of the city of Wrangell, which is served by the Alaska Marine Highway and jet service. The area is bordered to the north, east, west, and part of the south by forest roads and harvest areas. The area is partially bordered to the southwest by Thoms Lake and the surrounding area, which is owned by the state. The area is accessible from nearby forest roads and Thoms Lake. There are no sites suitable for landing wheeled aircraft. Access into the interior is by foot or helicopter.

**(2) History:** The Tlingit inhabited this area in prehistoric and historic times. While the area has likely been prospected for minerals, there are no known mining claims.

**(3) Geography and Topography:** The area is generally characterized by moderately diverse, rounded to occasionally blocky terrain, with mountains reaching elevations of over 2,000 feet. The tallest is approximately 2,650 feet in elevation. Between the mountains are several U-shaped valleys containing streams. Freshwater lakes cover about 108 acres. With the exception of the portion bounded by Thoms Lake, the area is entirely bounded by forest roads and associated timber management areas. There are no miles of saltwater shoreline and no ice, alpine, or rock features mapped in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is generally subject to continental influence from the mainland and the Stikine River. All forest plant associations except those occurring only on outer coast areas are present.

Ecological Section/Subsection. The Central Wrangell Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), Zimovia Strait Complex Ecological Subsection (see table below). Stratified sedimentary rock and volcanic intrusions lie beneath broad glacial valleys and rounded hills. Roughly half of the Zimovia Strait Complex Ecological Subsection includes mineral soils supporting productive hemlock forests with occasional stands of cedar or Sitka spruce (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Zimovia Strait Complex | 100% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or extremely shallow and rocky soils.

**(c) Vegetation:** Alpine vegetation dominates above 2,500 feet elevation. The valley floors and poorly drained areas between hills are generally covered with muskeg and scrub lodgepole pine. 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. Steeper, more-well-drained hillsides support heavy stands of Sitka spruce, western hemlock, red cedar, and Alaska-cedar.

There are approximately 14,847 acres mapped as forested land, of which 6,887 acres (46 percent) are mapped as productive old-growth forest. Of the productive old growth, 2,494 acres (36 percent) are mapped as high-volume, old-growth forest. The productive old growth includes about 247 acres of high-volume, coarse-canopy old growth. There is no second-growth forest where timber harvest has occurred in the past.

**(d) Fish Resources:** Fish species on the island include steelhead, rainbow, and native cutthroat trout; Dolly Varden char; chum, pink, coho, and sockeye salmon (USDA Forest Service, 1998). Thoms Creek and Fools Creek are substantial producers of salmon; portions of these watersheds are within the Central Wrangell Roadless Area.

**(e) Wildlife Resources:** Important species include Sitka black-tailed deer, wolves, black bear, pine marten, and small populations of brown bear and moose.

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

| LUD | Acres |
|---|---|
| Timber Production | 7,291 |
| Old-growth Habitat | 7,919 |

Approximately 48 percent of the roadless area was allocated to one development LUD, Timber Production. This LUD is located primarily in the eastern half of the roadless area.

Approximately 52 percent of the roadless area was allocated to one non-development LUD, Old-growth Habitat. This LUD is located primarily on the western half of the area.

Present recreation use levels are relatively low, except at streams and lakes near the roads, and occasionally at the mouths of some streams. Both the Thoms Lake and Long Lake Trails extend into the area and there is a shelter at the northwest end of Long Lake. The Wildlife Analysis Area that includes this roadless area accounted for 5 to 10 percent of annual average Wrangell deer harvest during 1987 to 1994.

This area includes the Little Foot and Shady timber sale project areas proposed in the 1998 Wrangell Island Analysis (USDA Forest Service, 1998). The Tongass National Forest 10-year action plan includes the Shady/Highbush project, which includes the northern and eastern portion of the roadless area and is scheduled for 2004.

**(6) Appearance (Apparent Naturalness):** Overall, the area has high scenic quality with a natural appearing landscape. The area is mainly visible from the surrounding roadless areas, forest roads, Thoms Lake recreation area, and limited viewing points on Zimovia Strait and Blake Channel.

**(7) Surroundings (External Influences):** The area is centrally located on the south end of Wrangell Island. The area is bordered to the north, east, west, and part of the south by forest roads and forest management areas. The area is partially bordered to the southwest by Thoms Lake and the surrounding area is owned by the state. It is

possible to see harvested areas from some locations within this roadless area. Timber sales are planned for portions of the roadless areas surrounding the Central Wrangell Roadless Area (USDA Forest Service, 2001).

**(8) Attractions and Features of Special Interest:** The area contains 10 inventoried recreation places, which cover 2,853 acres (19 percent) of the roadless area. There are no unique or special features in this area. Both the Thoms Lake and Long Lake Trails extend into the area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The Central Wrangell Roadless Area did not exist in 1989. At that time, it was part of the South Wrangell Roadless Area. Development activities between 1989 and 1996 separated the 1989 South Wrangell Roadless Area into five separate roadless areas. Several smaller areas have been excluded near the developed boundaries between the Draft and Final SEIS to improve manageability in those areas.

## II. Capability of Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is essentially unmodified. Approximately 88 percent of the area is natural appearing, where only ecological and geological change has occurred. The area is, however, almost completely surrounded by forest roads and harvested areas. These developed areas are visible from many parts of the roadless area. A portion of the Thoms Lake boardwalk trail passes through the western edge of the roadless area. The Long Lake boardwalk trail, 3-sided shelter, picnic table, and outhouse are located in the eastern portion of the roadless area.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a moderate opportunity for solitude within the area, especially after one has gone a short distance from the roads. Present recreation use levels are low except at streams and lakes near the roads, along the trails, at the Long Lake shelter, and occasionally at the mouths of some streams. Generally, a person camping or traveling inland is likely to see others only occasionally.

Travel within the area is not especially challenging, requiring only moderate woods skills and experience. The presence of both black and brown bears, especially around salmon streams in the fall, does present a degree of challenge and a need for caution.

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) | 9,184 | 60% |
| Semi-Primitive Motorized (SPM) | 3,313 | 22% |
| Roaded Natural (RN) | 28 | 0% |
| Roaded Modified (RM) | 2,685 | 18% |

The area contains 10 inventoried recreation places, which cover 2,853 acres (19 percent) of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| SPNM | 0 | 0 |
| SPM | 3 | 1,008 |
| RN | 2 | 28 |
| RM | 8 | 1,817 |

* 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 is accessible by road from the community of Wrangell in less than 1 hour and by boat from Ketchikan in approximately 7 hours. Both the Thoms Lake and Long Lake Trails extend into the area and there is a shelter at the northwest end of Long 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 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 South Wrangell Roadless Area was given a rating of 20 out of 28 possible points; the Central Wrangell Roadless Area represented only a portion of this area. The rating was redone for this updated version of the Analysis of the Management Situation. Based on this evaluation, the Central Wrangell Roadless Area was given a rating of 16. This rating reflects the developments on adjacent lands and their effects on wilderness attributes of this area.

**(4) Ecologic and Geologic Values:** The majority of the roadless area is forested. There are no known unique features in the area.

**(a) Fish Resources:** VCU 479, along the coast on Zimovia Strait, was listed as a primary sport fish producer, but none of the three VCUs were listed as primary salmon producers (ADF&G, 1998).

Several Class 1 and 2 streams run through the roadless area. Fish species on the island include steelhead, rainbow, and native cutthroat trout; Dolly Varden char; and chum, pink, coho, and sockeye salmon (USDA Forest Service, 1998). The area includes a very small stretch of Thoms Creek, which is the most productive fishery on Wrangell Island, providing a diversity of lake, stream, and estuary habitats, and supporting an important subsistence sockeye fishery. (However, the May 2000 Wrangell Island Road Guide identifies the part of the roadless area that includes this stretch as state-selected land that have not been conveyed yet).

**(b) Wildlife Resources:** This area contains habitat for black bear, Sitka black-tailed deer, moose, and wolves. Wrangell Island is also known to support brown bears, unlike many of the outer coast islands. Mountain lions, marten, and wolverine have also been reported on the island. Mountain goats have not been reported here. Wrangell Island also supports an endemic species and the Wrangell red-backed vole. According to the Wrangell Island Analysis Report (USDA Forest Service, 1998), introduced elk from Etolin Island may be colonizing the area.

The area generally contains low value deer winter range, with the exception of a few small blocks of moderate winter deer habitat within the Thoms Old Growth Reserve. Important marten habitat occurs along the beach and Fools Creek. Eagles, goshawks, and red-tailed hawks have been observed in the general area.

**(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 within or adjoining the Central Wrangell Roadless Area. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area, including 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 Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources**: There are no known karst and cave resources in the area.

**(5) Scientific and Educational Values:** There are opportunities to observe and study fish and wildlife and the various forces that formed the landscape. The area is located within a 1-hour drive of the city of Wrangell and is, therefore, relatively accessible to school-age children.

**(6) Scenic Values:** The majority of the area appears unmodified. The areas of development that bound the majority of the area are visible from some parts of the roadless area. Overall, the area has high scenic quality with a natural appearing landscape. The area is mainly visible from the surrounding roadless areas, forest roads, Thoms Lake recreation area, and limited viewing points on Zimovia Strait and Blake Channel.

Visual Priority Routes and Use Areas identified by the Forest Plan, which are adjacent to the area, include Fools Inlet (#6270), Thoms Lake Access (#6290), and Thoms Creek Crossing. They are all identified as Public Use Roads and form the east, south, and north boundaries of the area, respectively.

About 36 percent of the area is inventoried as Variety Class B (possessing landscape diversity that is common for the character type). Most of the area, approximately 64 percent, is in Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, approximately 77 percent, has an Existing Visual Condition (EVC) Type I, where only ecological change has occurred to the landscape. Two percent of the area is EVC Type III, where changes in the landscape are noticed by the average forest visitor, but the natural appearance of the landscape remains dominant. Approximately 9 percent of the area is in EVC Type IV, where changes in the landscape are easily noticed by the average person and may attract some attention. About 13 percent is 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:** The area was inhabited by the Tlingit in prehistoric and historic times. The area is accessible by automobile from the community of Wrangell. Present recreation use levels are low, except at streams and lakes near the roads, along the trails, at the Long Lake shelter, and occasionally at the mouths of some streams. The Wildlife Analysis Area that includes this roadless area accounted for 5 to 10 percent of annual average Wrangell deer harvest during 1987 to 1994. There is some subsistence use in the area. None of the VCUs were listed among the VCUs with the highest community use value, but all three were listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is bordered to the north, east, south, and part of the west by forest roads and harvest areas. The area is partially bordered to the west by Thoms Lake and the surrounding area owned by the state. The boundary formed by the state land is a series of straight lines that do not reflect the underlying topography or geographic features; however, this state land is unroaded. This relatively small area is poorly suited for wilderness management.

South Wrangell Island was mainly allocated to the Timber Production and Old-growth Habitat LUDs, with relatively small areas allocated to the Scenic Viewshed LUD. The roaded area northwest of the Central Wrangell Roadless Area was mainly allocated to the Modified Landscape LUD, which provides for natural-appearing landscapes while allowing timber harvest.

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

**(1) Recreation, Including Tourism Potential:** There is potential for additional outfitter and guide permits and for developed trails and cabins or shelters.

**(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:** No fish habitat enhancement projects have been identified for this area.

**(4) Wildlife Resources:** As identified in the Tongass Land and Resource Management Plan, amended 1985-86, there are opportunities for moose habitat improvement projects in the area. These projects typically consist of browse enhancement involving seeding, planting, and releasing.

**(5) Timber Resources:** There are approximately 6,887 acres mapped as productive old growth and no acres mapped as second growth due to harvest in the roadless area. Of these acres, 4,090 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), 1,326 acres or 9 percent of this roadless area are estimated to be suitable for timber production. Approximately 580 of the suitable acres are mapped as high-volume old growth; of these acres, 41 are mapped as high-volume, coarse-canopy old growth. Some areas are highly prone to strong winds which blow down standing timber left exposed by cutting adjacent stands. The potential for managing timber in this roadless area is high, as roads could be extended from the existing system and the area could be logged without constructing a camp or additional log transfer facilities.

This area includes the Little Foot and Shady timber sale project areas proposed in the 1998 Wrangell Island Analysis (USDA Forest Service, 1998). The Tongass National Forest 10-year action plan includes the Shady/Highbush project, which includes the northern and eastern portion of the roadless area and is scheduled for 2004.

**(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 area generally has a low minerals rating and there are no known current claims.

**(8) Transportation and Utilities:** The March 1999 Southeast Alaska Transportation Plan proposed implementation of a new shuttle-ferry and road system, referred to as the *Inside Passage Highway*, connecting Petersburg, Wrangell, and Ketchikan. Proposed road improvements on Wrangell Island include upgrading Forest Road 6265 and Fools Inlet Road, as well as constructing 3 miles of new roadway to a new ferry terminal at Fools Inlet. Forest Road 6265 and Fools Inlet Road form the east boundary of the Central Wrangell Roadless Area and any improvements would be visible from some locations within the area. There are no proposed transportation or utility corridors located within the area. There may be new roads proposed for timber management in LUDs that allow such activity.

**(9) Water Availability and Use:** There are no existing or planned hydropower or domestic water projects in the area.

**(10) Areas of Scientific Interest:** The area contains no Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** No special uses are authorized in this area.

**(12) Land Status:** The entire roadless area is National Forest System land. This roadless area contains two areas of selected, or encumbered lands, located in the northern and southern tip of the roadless area.

## IV. Wilderness Evaluation (Need for Wilderness)

### (1) Public and Congressional Interest

**(a) Interest Expressed by Local Users and Residents:** There have been no local initiatives or public sentiment expressed to have the area remain roadless. There has been interest by some residents of Wrangell in developing additional roads in the unroaded portions of Wrangell Island to facilitate additional logging and roaded recreation opportunities (USDA Forest Service, 1990).

**(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 Central Wrangell Roadless 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. The

roaded area between the Central Wrangell and South Wrangell Roadless Areas was also proposed as a Restoration Area.

**(c) Public Input During Forest Plan Revision and Appeals:** No specific recommendations were made for wilderness. The Southeast Alaska Conservation Council included South Wrangell Island in their 1991 list of areas that merited special management protection because of their outstanding wildlife, fisheries, hunting, fishing, subsistence, recreation, and tourism values.

The Wrangell Resource Council recommended that Wrangell Island be allocated to the Primitive Recreation LUD. Timber industry comments recommended that Management Area S25, which includes the South Wrangell Roadless Area, be allocated to the Timber Production LUD. Other timber industry comments recommended that with the exception of some Scenic Viewshed or Modified Landscape along the ferry route all of Management Area S25 should be allocated to the Timber Production LUD to keep timber harvest economic in these already developed areas.

**(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 land in the Tongass to be protected from development.

**(e) Public Input Expressed for Project-level EISs and Other Input:** Public comments summarized for Wrangell Island in the Wrangell Island Analysis (USDA Forest Service, 1998) did not include a desire by the public to have the area remain roadless or be designated wilderness. Many of the issues raised concerned recreation, with local residents citing the need for more hiking trails, winter recreation opportunities (snowmobiling and skiing), cabins, and shelters on the island, and recreational driving/camping opportunities. Some people would like to have primitive campsites designated near beaches around the island. This summary suggested that local residents generally consider timber and recreation to be compatible on Wrangell Island, with people generally wanting to keep logging roads open for public use. The summary also noted an increasing concern about the cumulative effects of timber harvest, road building, and recreation development on wildlife habitat (USDA Forest Service, 1998).

**(f) Public Input Expressed During Supplemental EIS Process:** SEACC recommended the remaining roadless areas on Wrangell Island be designated LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 289 for permanent protection as LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** There are four other roadless areas on south Wrangell Island. They are separated from the Central Wrangell Roadless Area by forest roads and harvest areas. Present recreation use levels are low in these areas except around Fools Inlet, at streams and lakes near the roads, and occasionally at the mouths of some streams. Subsistence use in the Wildlife Analysis Area that includes South Wrangell Island accounted for 5 to 10 percent of average annual deer harvest from 1987 to 1994. Thoms Lake recreation area forms part of the Central Wrangell Roadless Area's west boundary. Use levels are generally higher along the boardwalk trails to Thoms Lake and Long Lake than in other parts of the roadless area.

The nearest wilderness is the South Etolin Island Wilderness located about 5 miles to the southwest. The Stikine-LeConte Wilderness is located approximately 12 miles north of the Central Wrangell Roadless Area. This area currently receives light to moderate use inland, away from saltwater or road access.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 55 | 85 |
| Wrangell (Pop. 2,308) | 10 | 20 |
| Petersburg (Pop. 3,224) | 45 | 60 |
| Juneau (Pop. 30,711) | 160 | 180 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Central Wrangell Roadless Area is centrally located on south Wrangell Island, approximately 20 miles south of the city of Wrangell The area is bordered to the north, east, west, and part of the south by developed areas. The area is partially bordered to the southwest by Thoms Lake and the surrounding area owned by the state. The roadless area is generally characterized by moderately diverse, rounded to occasionally blocky terrain, with mountains reaching elevations of over 2,000 feet. The tallest is approximately 2,650 feet in elevation. Between the mountains are several U-shaped valleys containing streams.

The area itself is mostly unmodified; however, it is heavily influenced by developments and activities on adjacent lands. The natural integrity and apparent naturalness is moderate. The opportunity for solitude and primitive recreation is moderate.

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

The roadless area includes about 2,494 acres of high-volume, old-growth forest. Of these acres, 247 are mapped as high-volume, coarse-canopy old growth.

The Central Wrangell Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes up approximately 3 percent of the province. It is 1 of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The Central Wrangell 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.

The Central Wrangell Roadless Area lies completely within the Zimovia Strait Complex Ecological Subsection and represents 7 percent of the ecological subsection. Approximately 5 percent of the subsection is protected in existing wilderness and 26 percent in other existing non-development LUDs.

The Central Wrangell Roadless Area was rated 16 out of a possible 28 points under the 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 little support for management of the area in an unroaded condition, and there is little support for designating the area as wilderness. Designation would create an irregularly shaped wilderness that has no significant or unique 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 Central Wrangell Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 52 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 48 percent. The land in the development LUDs provides an estimated 1,326 acres that are suitable for timber production (2 percent of the suitable acres on the Wrangell Ranger District). Approximately 41 of the suitable acres are classified as high-volume, coarse-canopy old growth. The timber sales, 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 allowed by the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. 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.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses programs 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 would be provided long-term protection if designated wilderness.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 289 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 15,210 |
| 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 | 7,919 | 7,919 | 7,919 | 7,919 | 7,919 | | 7,919 | |
| Semi-remote Recreation | | | | | | | | |
| Recommended LUD II | | | | | | 15,210 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | 7,291 | 7,291 | 7,291 | 7,291 | 7,291 | | 7,291 | |
| **TOTAL** | **15,210** | **15,210** | **15,210** | **15,210** | **15,210** | **15,210** | **15,210** | **15,210** |
| Suitable Timber Lands | 1,326 | 1,326 | 1,326 | 1,326 | 1,326 | 0 | 1,326 | 0 |

**INDIVIDUAL ROADLESS AREA DESCRIPTION**

**ROADLESS AREA NAME:** Southeast Wrangell (290)

**ACRES (NFS):** 20,297

**BIOGEOGRAPHIC PROVINCE:** Etolin Island and Vicinity

**ECOLOGICAL SECTION:** Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 17

## I. Overview and Description

**(1) Location and Access:** This area is located on southeast Wrangell Island, approximately 15 miles southeast of the city of Wrangell, which is served by the Alaska Marine Highway and jet service. The area is separated from the mainland to the south by Ernest Sound. The 138 kV Tyee Powerline forms the east and part of the north boundary of the area along Blake Channel. The area is bounded to the west, and the remainder of the north, by Fools Inlet, Fools Inlet Road, and several forest roads and associated harvest units. The area is accessible from the surrounding saltwater and by forest roads. There are no sites suitable for landing wheeled aircraft. Access into the interior is by foot or helicopter.

**(2) History:** The area was inhabited by the Tlingit in prehistoric and historic times. While the area has likely been prospected for minerals, there are no known mining claims. The Tyee powerline that forms the east and part of the north boundary was constructed in 1984.

**(3) Geography and Topography:** The area is generally characterized by a mountainous ridge, which reaches elevations over 2,000 feet and with a high point of almost 3,000 feet. Between the mountains are several U-shaped valleys containing streams. The mountain ridge that dominates the area contains numerous small cirque lakes and short, steep streams. The area is bordered by saltwater to the south and Fools Inlet forms part of the area's west boundary. Freshwater lakes cover about 234 acres, alpine covers 160 acres, and rock covers 54 acres. The area includes approximately 13 miles of saltwater shoreline and 3 acres of small islands.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is generally subject to continental influence from the mainland and the Stikine River. All forest plant associations except those occurring only on outer coast areas are present.

Ecological Section/Subsection. The Southeast Wrangell Roadless Area is contained entirely within the Inside Passage Fjordlands Ecological Section (M247E), represented by two ecological subsections (see table below). Covering the southern three-quarters of the roadless area, the Bell Island Granitics Ecological Subsection is characterized by rounded hills and narrow, glacially scoured valleys. Mountain slope soils are usually well-drained, mineral soil, while lowlands, lake margins and wetlands are typically poorly drained soils. The Zimovia Strait Complex Ecological Subsection covers the remaining quarter of the roadless area. It is composed of stratified sedimentary rock and volcanic intrusions lying beneath broad glacial valleys and rounded hills. Roughly half of the Zimovia Strait Complex Ecological Subsection includes mineral soils supporting productive hemlock forests with occasional stands of cedar or Sitka spruce (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Bell Island Granitics | 74% |
| | Zimovia Strait Complex | 26% |

**(b) Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately well-drained soils are on moderate to steep mountain slopes with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly drained soils develop on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg.

Alpine soils, generally above 2,000 feet elevation, are mostly shallow, very wet organic soils or extremely shallow and rocky soils.

**(c) Vegetation:** Alpine vegetation dominates above 2,500 feet elevation. The valley floors and poorly drained areas between hills are generally covered with muskeg and scrub lodgepole pine. Steeper, well-drained hillsides support heavy stands of Sitka spruce, western hemlock, red cedar, and Alaska-cedar. There are small grass flats at the head of Fools Inlet.

There are approximately 19,137 acres mapped as forest land, of which 8,527 acres (45 percent) are mapped as productive old-growth forest. Of the productive old growth, 2,889 acres (34 percent) are mapped as high-volume, old-growth forest. The productive old growth includes about 172 acres of high-volume, coarse-canopy old growth. In addition, 173 acres of second growth have resulted from logging activities north and west of Fools Inlet.

**(d) Fish Resources:** This roadless area includes the Off Point 1 and Ham watersheds, as well as a small part of the Fools Creek watershed. The most important riparian zones on the island are associated with very low gradient floodplain stream channels found in watersheds, such as the Fools Creek watershed. Fish species on the island include steelhead, rainbow, and native cutthroat trout; Dolly Varden char; and chum, pink, coho, and sockeye salmon (USDA Forest Service, 1998).

**(e) Wildlife Resources:** Important species include Sitka black-tailed deer, wolves, black bear, pine marten, and small populations of brown bear and moose.

**(5) Management Direction and Current Uses:** The area was allocated to three 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 | 9,340 |
| Scenic Viewshed | 1,194 |
| Old-growth Habitat | 9,763 |

Approximately 52 percent of the roadless area was allocated to a development LUD (Timber Production and Scenic Viewshed). The east side and northern part of the area were mostly allocated to the Timber Production LUD, accounting for approximately 46 percent of the roadless area. A long narrow area adjacent to the Tyee Powerline on the east side of the area was allocated to the Scenic Viewshed LUD, accounting for approximately 6 percent of the roadless area.

Approximately 48 percent of the roadless area was allocated to one development LUD, Old-growth Habitat. The Old-Growth Reserve that occupies the southwest and southern portions of the area was allocated to the Old-growth Habitat LUD as part of the Forest-wide wildlife conservation strategy. A smaller reserve area in the north portion of the area was also allocated to this LUD.

The estuary at Fools Inlet is a popular waterfowl hunting spot. Hunters access this area from saltwater and overland from the road system (USDA Forest Service, 1998). Present recreation use levels are low except around Fools Inlet, at streams and lakes near the roads, and occasionally at the mouths of some streams. The Wildlife Analysis Area that includes this roadless area accounted for 5 to 10 percent of annual average Wrangell deer harvest during 1987 to 1994.

This area includes part of the Blake timber sale project area proposed in the 1998 Wrangell Island Analysis (USDA Forest Service, 1998). This timber sale area is partially located in the east portion of the Southeast Wrangell Roadless Area. A second timber sale proposed in the Wrangell Island Analysis, the Fools timber sale, is located on the west edge of this roadless area, and is included in the Shady/Highbush timber sale analysis area.

The Tongass National Forest 10-year action plan identified a proposed Shady/Highbush timber sale EIS in 2003, which would result in harvest of 7.5 MMBF in 2004.

**(6) Appearance (Apparent Naturalness):** Overall, the area has high scenic quality with a natural appearing landscape and provides scenery from surrounding land and saltwater areas, including Ernest Sound and Blake Channel. However, the Tyee powerline occupies the foreground of views of the roadless area from Blake Channel. The Forest Service maintains a radio repeater on the mountaintop at the south end of the roadless area.

**(7) Surroundings (External Influences):** This area is located on southeast Wrangell Island. Ernest Sound separates this area from the mainland to the south. The Tyee powerline forms the east and part of the north boundary of the area. The area is bounded on the west and the remainder of the north by Fools Inlet, Fools Inlet Road, and several forest roads and associated harvest units. Timber sales are planned for portions of the roadless areas north and west of the Southeast Wrangell Roadless Area (USDA Forest Service, 2001). Boats traveling the waters of Blake Channel and Ernest Sound may be visible from within parts of the area, but usually are not intrusive. It is possible to see harvested areas, as well as the Tyee powerline, from some locations within this roadless area.

**(8) Attractions and Features of Special Interest:** The area contains 6 inventoried recreation places, which cover 1,535 acres, or 8 percent of the roadless area. The estuary at Fools Inlet is a popular waterfowl hunting spot. Hunters access this area from saltwater and overland from the road system. There are no improved trails in the area.

**(9) Differences between the 1989 and 2003Roadless Area Boundary:** The Southeast Wrangell Roadless Area did not exist in 1989. At that time it was part of the South Wrangell Roadless Area. Development activities between 1989 and 1996 separated the 1989 South Wrangell Roadless Area into five separate roadless areas. Several smaller areas have been excluded from the area between the Draft and Final SEIS to improve manageability in those areas.

## II. Capability of Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is essentially unmodified. Approximately 88 percent of the area is natural appearing, where only ecological and geological change has occurred. However, the Tyee powerline and a number of harvest units and roads are visible from portions of the area and affect the natural integrity and apparent naturalness of the area.

**(2) Opportunity for Solitude, Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a moderate opportunity for solitude within the area, especially after one has gone a short distance from the roads. Present recreation use levels are low except around Fools Inlet, at streams and lakes near the roads, and occasionally at the mouths of some streams. Generally, a person camped or traveling inland is likely to see others only occasionally. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity.

Travel within the area is moderately challenging, requiring moderate woods skills and experience. The presence of both black and brown bears, especially around salmon streams in the fall, does present a degree of challenge and a need for caution.

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) | 11,880 | 59% |
| Semi-Primitive Motorized (SPM) | 6,213 | 31% |
| Roaded Modified (RM) | 2,204 | 11% |

The area contains 6 inventoried recreation places, which cover 1,535 acres (8 percent) of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| SPNM | 0 | 0 |
| SPM | 1 | 699 |
| RM | 6 | 836 |

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

The estuary at Fools Inlet is a popular waterfowl hunting spot. Hunters access this area from saltwater and overland from the road system (USDA Forest Service, 1998). The area is accessible by boat from the community of Wrangell in 1 to 2 hours and from Ketchikan in approximately 7 hours. Access on land is by road from the city of Wrangell in about 1 hour.

**(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 South Wrangell Roadless Area was given a rating of 20 out of 28 possible points; the Southeast Wrangell Roadless Area represented only a portion of this area. The rating was redone for the Southeast Wrangell Roadless Area for this updated version of the Analysis of the Management Situation. Based on this evaluation, the area was given a rating of 17. This rating reflects the developments and activities in the vicinity of this area on its wilderness attributes.

**(4) Ecologic and Geologic Values:** The majority of the roadless area is forested with areas of higher volume old-growth forest concentrated along the lower elevation areas. Logging has occurred north and west of Fools Inlet. There are no known unique features in the area.

**(a) Fish Resources:** The Southeast Wrangell Roadless area includes portions of three separate VCUs. None of these VCUs were listed as primary sport fish or salmon producers. A number of Class II streams are located within the boundaries of this roadless area.

This roadless area includes the Off Point 1 and Ham watersheds, as well as a small part of Fools Creek watershed. The most important riparian zones on the island are associated with very low gradient floodplain stream channels found in watersheds, such as the Fools Creek watershed. Fish species on the island include steelhead, rainbow, and native cutthroat trout; Dolly Varden char; and chum, pink, coho, and sockeye salmon (USDA Forest Service, 1998).

**(b) Wildlife Resources:** Important species include Sitka black-tailed deer, wolves, black bear, pine marten, and small populations of brown bear and moose. Earlier analyses rated the Fools Landscape Unit, which includes part of the Southeast Wrangell Roadless Area, as moderate value for wildlife (USDA Forest Service, 1998). The area contains low value deer winter range, although a few small blocks of moderate winter deer habitat remain at Fools Inlet. Important marten habitat occurs along the beach and Fools Creek.

The Fools Creek estuary provides important habitat for salmon and shellfish, which serve as a food source for many wildlife species including otter, mink, and bear (USDA Forest Service, 1998). Eagles, goshawks, and red-tailed hawks have been observed in the general 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, including 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 Wrangell Ranger District.

**(d) Karst, Cave, and Other Geologic Resources:** There are no known karst and cave resources in the area.

**(5) Scientific and Educational Values:** There are opportunities to observe and study fish and wildlife and the various forces that formed the landscape. The area is located approximately 2 to 3 hours by boat and 1 hour by automobile from the city of Wrangell and is, therefore, relatively accessible to school-age children.

**(6) Scenic Values:** The majority of the area appears unmodified and generally has high scenic quality. The Tyee powerline that forms the east and part of the north boundary of the area is obvious from some parts of the roadless area and also to people viewing the area from Blake Channel. Fools Inlet Road and the forest roads and associated harvest units that bound part of the area to the west and the remainder of the north are also visible from some parts of the roadless area. Logging has occurred north and west of Fools Inlet.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include Blake Channel and Ernest Sound, which are used by small tour ships. The road that borders the area to the west, Fools Inlet (#6270), is identified as a Visual Priority Public Use Road. Fools Inlet, which forms part of the area's west boundary, is identified as a Visual Priority Saltwater Use Area and Boat Anchorage.

Most of this area, approximately 75 percent, is inventoried as Variety Class A (possessing landscape diversity that is unique for the character type). About 19 percent of the area is inventoried as Variety Class B (possessing landscape diversity that is common for the character type) and about 6 percent is inventoried as Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, approximately 83 percent, has an Existing Visual Condition (EVC) Type I, where only ecological change has occurred on the landscape. One percent of the area appears to be untouched by human activity (EVC Type II). Ten percent of this roadless area is EVC Type III, where the average forest visitor notices changes in the landscape, but the natural appearance remains dominant. About 5 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.

**(7) Social, Cultural, and Historical Values:** The area was inhabited by the Tlingit in prehistoric and historic times. The area is accessible by boat and automobile from the community of Wrangell. Wrangell is also the closest stop on the Alaska Marine Highway. Present recreation use levels are low, except around Fools Inlet (which is used by waterfowl hunters), at streams and lakes near roads, and occasionally at the mouths of some streams.

The Wildlife Analysis Area that includes this roadless area accounted for 5 to 10 percent of annual average Wrangell deer harvest during 1987 to 1994. There is some subsistence use in the area. The VCUs in this area were not listed among the VCUs with the highest community use values, but were listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998)

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is well defined by saltwater on the south and part of its west boundaries. The Tyee powerline forms the east and part of the north boundary of the area. The remainder of the west boundary is formed by forest roads and associated harvest units.

The south central portion of Wrangell Island was mainly allocated to the Timber Production and Old-growth Habitat LUDs, with relatively small areas allocated to the Scenic Viewshed LUD. Anan Creek, a congressionally designated LUD II area, is located on the mainland immediately south across Ernest Sound from the Southeast Wrangell 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 outfitter and guide permits and for developed trails and cabins or shelters.

**(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:** No fish habitat enhancement projects have been identified for this area.

**(4) Wildlife Resources:** There are opportunities for moose habitat improvement projects in the area. These projects typically consist of browse enhancement involving seeding, planting, and releasing.

**(5) Timber Resources:** There are approximately 8,527 acres mapped as productive old growth in the roadless area. In addition, 173 acres mapped as second growth have resulted from logging activities north and west of Fools Inlet. Of these acres, 4,889 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), 1,109 acres (5 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, only one is mapped as high-volume, coarse-canopy old growth. Some areas are highly prone to strong winds that blow down standing timber left exposed by cutting adjacent stands.

The potential for managing timber in this roadless area is high, as roads could be extended from the existing system and the area could be logged without constructing a camp or additional log transfer facilities.

This area includes part of the Blake Timber Sale project area proposed in the 1998 Wrangell Island Analysis. The timber sale area is located in the east portion of the Southeast Wrangell Roadless Area. A second timber sale proposed in the Wrangell Island Analysis, the Fools Timber Sale, is located on the west edge of this roadless area, and is included in the Shady/Highbush timber sale analysis area (USDA Forest Service, 1998). The Tongass National Forest's 10-year action plan identified a proposed Shady/Highbush timber sale of 7.5 MMBF in 2004 with an EIS in 2003. Portions of this proposed sale would be in the 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:** There are no known current claims in this area. This roadless area contains an estimated 36 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:** The March 1999 Southeast Alaska Transportation Plan proposed implementation of a new shuttle-ferry and road system, referred to as the *Inside Passage Highway*, connecting Petersburg, Wrangell, and Ketchikan. This plan would be accomplished by using a combination of new ferry terminals and upgraded road segments and a fast ferry route between South Wrangell Island and Ketchikan. Proposed road improvements on Wrangell Island include upgrading Forest Road 6265 and Fools Inlet Road, as well as constructing 3 miles of new roadway to a new ferry terminal at Fools Inlet. Forest Road 6265 and Fools Inlet Road presently form the west boundary of the Southeast Wrangell Roadless Area. A final terminal location was not

identified in the plan but the maps accompanying the plan show the potential location of the terminal and the 3 miles of new road on the west side of the inlet, just outside the boundaries of the Southeast Wrangell Roadless Area (State of Alaska, Department of Transportation and Public Utilities, 1999). No additional utility corridors have been proposed within the roadless area.

**(9) Water Availability and Use:** There are no existing or planned hydropower or domestic water projects in the area.

**(10) Areas of Scientific Interest:** The area contains no inventoried potential Research Natural Areas and has not been identified for any other scientific value.

**(11) Land Use Authorizations:** The Tyee powerline that forms the east and part of the north boundary of the area is under special use permit. A radio repeater is located on a mountaintop between Fools Inlet and Blake Channel.

**(12) Land Status:** All land within the roadless area is part of the National Forest System; however, a small area of selected or encumbered land is located in the northeast corner of this area.

## IV. Wilderness Evaluation (Need for Wilderness)

### (1) Public and Congressional Interest

**(a) Interest Expressed by Local Users and Residents:** There have been no local initiatives or public sentiment expressed to have the area remain roadless. There has been interest by some residents of Wrangell in developing additional roads in the unroaded portions of Wrangell Island to facilitate additional logging and roaded recreation opportunities (USDA Forest Service, 1990).

**(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 Southeast Wrangell Roadless Area. In 2001, HR 2908 did not propose the area for wilderness, but did propose that the majority of the area be classified as a Congressionally Designated LUD II area and managed in an unroaded condition. The area located west and north of Fools Inlet was proposed as a Restoration Area.

**(c) Public Input During Forest Plan Revision and Appeals:** No specific recommendations were made for wilderness. The Southeast Alaska Conservation Council included South Wrangell Island and Blake Channel in their 1991 list of areas that merited special management protection because of their outstanding wildlife, fisheries, hunting, fishing, subsistence, recreation, and tourism values. One party proposed that the head of Fools Inlet be allocated to the Semi-primitive LUD to protect the anchorages and undeveloped recreation areas.

The Wrangell Resource Council recommended that Wrangell Island be allocated to the Primitive Recreation LUD. Comments from the timber industry recommended that Management Area S25, which includes the Southeast Wrangell Roadless Area, be allocated to the Timber Production LUD. Other timber industry comments recommended that, with the exception of some Scenic Viewshed or Modified Landscape along the ferry route, all of Management Area S25 should be allocated to the Timber Production LUD to keep timber harvest economic in these already developed areas.

**(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 land in the Tongass to be protected from development.

**(e) Public Input Expressed for Project-level EISs and Other Input:** The summary of public comments presented in the Wrangell Island Analysis (USDA Forest Service, 1998) did not include a desire by the public to have the area remain roadless or be designated wilderness. Many of the issues raised concerned recreation, with local residents citing the need for more hiking trails, winter recreation

opportunities (snowmobiling and skiing), cabins, and shelters on the island, and recreational driving/camping opportunities. Some people would like to have primitive campsites designated near beaches around the island. The summary of public comments presented in the Wrangell Island Analysis suggested that local residents generally consider timber and recreation to be compatible on Wrangell Island, with people generally wanting to keep logging roads open for public use. The summary also noted increasing public concern about the cumulative effects of timber harvest, road building, and recreation development on wildlife habitat (USDA Forest Service, 1998). The summary noted that the Fools Inlet area is routinely cited for its high wildlife values.

**(f) Public Input Expressed During Supplemental SEIS Process:** SEACC recommended the remaining roadless areas on Wrangell Island be designated LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 290 for permanent protection as LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The East Wrangell Roadless Area is located north and northeast of this area. These two areas are separated by the Tyee powerline and associated right-of-way. The Central, South, and West Wrangell roadless areas are located west, separated from one another by existing roads and harvest units. Present recreation use levels are low except around Fools Inlet, at streams and lakes near the roads, and occasionally at the mouths of some streams. Subsistence use in the Wildlife Analysis Area that includes South Wrangell Island accounted for 5 to 10 percent of average annual deer harvest from 1987 to 1994. Road improvements, proposed for Wrangell Island in the March 1999 Southeast Alaska Transportation Plan, included upgrading Forest Road 6265 and Fools Inlet Road, which form the west boundary of the Southeast Wrangell Roadless Area, as well as constructing 3 miles of new roadway to a new ferry terminal at Fools Inlet.

The Congressionally designated Anan Creek roadless area (LUD II) is located directly south across Ernest Sound from the Southeast Wrangell Roadless Area. Nineteen outfitter/guides used the Anan Creek roadless area in 2000, for a total of 829 service days.

The nearest wilderness is the South Etolin Island Wilderness located about 10 miles to the southwest. The Stikine-LeConte Wilderness is located approximately 12 miles north of the Southeast Wrangell Roadless Area.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Ketchikan (Pop. 14,070) | 50 | 75 |
| Wrangell (Pop. 2,308) | 15 | 30 |
| Petersburg (Pop. 3,224) | 50 | 60 |
| Juneau (Pop. 30,711) | 165 | 180 |

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Southeast Wrangell Roadless Area is located on southeast Wrangell Island, approximately 14 miles southeast of the city of Wrangell. The area is separated from the mainland to the south by Ernest Sound. The 138 kV Tyee Powerline forms the east and part of the north boundary of the area along Blake Channel. The area is bounded to the west and the remainder of the north by Fools Inlet, Fools Inlet Road, and several forest roads and associated harvest units. The roadless area is generally characterized by a mountainous ridge that reaches elevations of over 2,000 feet with a high point of almost 3,000 feet. Between the mountains are several U-shaped valleys containing streams. The mountain ridge that dominates the area contains numerous small cirque lakes and short, steep streams. The area is bordered by saltwater to the south and Fools Inlet forms part of the area's west boundary.

The area is mostly unmodified; however, it is influenced by developments and activities on most borders. The natural integrity is high and the apparent naturalness is moderate. The opportunity for solitude and primitive recreation is moderate.

Approximately 75 percent of the landscape is considered distinctive for the character type from a scenery standpoint. There are no other unique or significant features in the area.

The roadless area includes about 2,889 acres of high-volume, old-growth forest. Of these acres, 172 are mapped as high-volume, coarse-canopy old growth.

The Southeast Wrangell Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes up approximately 4 percent of the province. It is 1 of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The Southeast Wrangell 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.

The majority (74 percent) of the roadless area is in the Bell Island Granitics Ecological Subsection; this portion of the roadless area represents 5 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). The remainder (26 percent) of the roadless area is in the Zimovia Strait Complex Ecological Subsection; this portion of the roadless area 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 Southeast Wrangell Roadless Area was rated 17 out of a possible 28 points under the WARS. As such, its WARS rating is ranked 93rd from the highest (along with 4 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for management of the area in an unroaded condition, and some support for designating the area as wilderness. Designation would create a wilderness that has high scenic qualities, but that is also heavily influenced by developments and activities in adjacent lands. 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 Southeast Wrangell 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. The land in the development LUDs provides an estimated 1,109 acres that are suitable for timber production (1 percent of the suitable acres on the Wrangell Ranger District). Approximately 1 of the suitable acres is classified as high-volume, coarse-canopy old growth. This area contains an estimated 36 acres of undiscovered locatable mineral resources; all of the acres are considered to have low potential for development. The timber sales, 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 allowed under the Forest Plan. The high scenic values 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, minerals, and special use 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 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. No timber harvest would be allowed and the ongoing recreation, minerals, and special use 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, including the scenic values, would be provided long-term protection if designated wilderness.

| Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 290 (in acres) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Land Use Designation** | **Alt 1** | **Alt 2** | **Alt 3** | **Alt 4** | **Alt 5** | **Alt 6** | **Alt 7** | **Alt 8** |
| **Recommended Wilderness** | | | | | | | | 20,297 |
| **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** | 9,763 | 9,763 | 9,763 | 9,763 | 9,763 | | 9,763 | |
| **Semi-remote Recreation** | | | | | | | | |
| **Recommended LUD II** | | | | | | 20,297 | | |
| **LUD II** | | | | | | | | |
| **Wild, Scenic, Recreational River** | | | | | | | | |
| **Experimental Forest** | | | | | | | | |
| **Scenic Viewshed** | 1,194 | 1,194 | 1,194 | 1,194 | 1,194 | | 1,194 | |
| **Modified Landscape** | | | | | | | | |
| **Timber Production** | 9,340 | 9,340 | 9,340 | 9,340 | 9,340 | | 9,340 | |
| **TOTAL** | **20,297** | **20,297** | **20,297** | **20,297** | **20,297** | **20,297** | **20,297** | **20,297** |
| **Suitable Timber Lands** | 1,109 | 1,109 | 1,109 | 1,109 | 1,109 | 0 | 1,109 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Skagway-Juneau Icefield (301)

**ACRES (NFS):** 1,201,474

**BIOGEOGRAPHIC PROVINCE:** Ice Fields, Lynn Canal, and Northern Coast Range

**ECOLOGICAL SECTION:** Boundary Ranges, Kootznoowoo Fjordlands, and Chilkat River Complex

**2003 WILDERNESS ATTRIBUTE RATING:** 25 (24, 25)

### I. Overview and Description

**(1) Location and Access:** The area is located on the Juneau mainland and is bordered by the Canadian Border to the east, non-National Forest System lands, including the city of Skagway to the north, the city of Juneau and the Taku-Snettisham Roadless Area (# 302) to the south, and Lynn Canal, and the Juneau Urban Roadless Area (# 305) to the west. The southern boundary is bounded partially by the southern edge of the Juneau Icefield above the Taku Inlet and the Taku River drainage.

Access to this vast area is by a variety of means. Road and railroad access is possible from Skagway, which lies on the north edge of the area. This access extends from Skagway to the north, across the U.S./Canadian border into the Yukon Territory. Helicopters, airplanes, floatplanes, and occasional ski planes are used to access many parts of the area. Boats are used to access those portions of the roadless area bordered by saltwater. Airboats sometimes access the Katzehin River and Berners Bay estuary, and associated river systems. There is a primitive landing strip, which is not maintained by the Forest Service, at a public recreation cabin near the Katzehin River.

Recreationists can also access portions of the area by foot from trails off the Juneau Road System, particularly from above the Mendenhall Glacier and from near the Lemon Creek area by the Juneau Icefield Research Project's Camp 17. Two trails provide access to the backcountry from the White Pass and Yukon Railroad in Skagway.

The area is located adjacent to the cities of Juneau and Skagway and is approximately 3 miles from the city of Haines. The Alaska Marine Highway ferries provide access to the communities of Juneau, Haines, and Skagway, but there are no stops within the roadless area. Lynn Canal is considered a major travel route for both commercial and non-commercial use.

**(2) History:** Past uses in the Skagway-Juneau Icefield Roadless Area include personal sporting ventures and commercially guided ventures including technical ice and rock climbing, ski touring, photography, and camping. Commercial helicopter landing tours and numerous fixed-wing craft conduct "flightseeing" tours over the Icefield and glaciers. The Oceanographic Division of the U.S. Army has conducted research on the Gilkey Glacier and its tributaries. Dr. Maynard Miller has conducted glacial research through the Foundation of Glacier Research across the entire Icefield for approximately 40 years and research is currently ongoing.

The Berners Bay area has evidence of gold mining activities from the early 1900s including several old farming homesteads. In addition, Goldschmidt and Haas (1946) identified a former native village and smokehouse or cabin in the Berners Bay area. They also identified a former smokehouse or cabin site along the Katzehin River. There are identified cultural sites in Berners Bay, and Lions Head Mountain has cultural significance.

Two mines, the Kensington and Jualin, have current Plans of Operation on file.

There are three cabins and one tent platform in the Berners Bay area that are currently under special use permit. In the Denver Glacier Trail area, there is an old recreation residence cabin that was under special use permit, but is no longer being used.

**(3) Geography and Topography:** The area is generally characterized by a great variety of geological features with large, massive landforms. Uplands are generally 5,000 to 7,000 feet in elevation. The Juneau Icefield is the predominant landform in this area along with the resultant glaciers. In the Skagway area, the Icefield gives way to dramatic rock mountains with deep, steep-walled, U-shaped valleys. Along Lynn Canal there are several glaciers between precipitous cliffs and mountain walls, which are visible from the saltwater. Hanging glaciers are the source of many beautiful waterfalls. Ice and snow total 508,934 acres, rock covers 266,000 acres, and alpine covers 5,384 of this roadless area. Freshwater lakes comprise 2,876 total acres. There are 159 miles of shoreline on saltwater. This roadless area also includes 339 islands and islets (69 of these are greater than 10 acres) totaling 3,274 acres of land.

Major river systems in the area include the Katzehin River, and the Berners, Lace, Antler, and Gilkey Rivers, which flow into Berners Bay. The Berners Bay area is characterized by these moderately large streams whose deltas form a broad intertidal flat into the shallow, sandy bay. These river systems are all fed by glaciers.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. This vast area, over 1.2 million acres, includes three biogeographic provinces (Ice Fields, Lynn Canal, and Northern Coast Range). The majority of the area is located within the Ice Fields Province, which is generally characterized by permanent ice fields, active glaciers, and nunatuks (mountain peaks between glaciers). The lower southwestern portion of the area, which extends along the Lynn Canal, is located within the Lynn Canal Province. The topography in this area is typically rugged and glaciated. Rain shadows and the dominating influence of the continental climate make this the driest and seasonally warmest province in Southeast Alaska. The area located northwest of Taku Inlet is within the Northern Coast Range Province, which is characterized by little maritime influence and rugged and glaciated topography.

Ecological Section/Subsection. The Juneau-Skagway Icefield Roadless Area is contained mostly within the Boundary Ranges Ecological Section (M246B) in addition to the small portions within the Kootznoowoo Fjordlands Ecological Section (M247D) and Chilkat River Complex (M246A). These areas are represented by four ecological subsections (see table below). The Boundary Ranges Icefields Ecological Subsection represents the vast majority of the Juneau-Skagway Icefield 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. Of the three lower elevation ecological subsections, the Stephen Passage Glaciomarine Terrace is the most prevalent at 3 percent of the roadless area. This subsection contains glaciomarine terraces that grade into mountain slopes. Estuaries and marshes can be found along the coastal areas of the terraces, while hemlock-spruce forests dominate the mountain slopes (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Boundary Ranges | Boundary Ranges Icefields | 97% |
| | Stikine-Taku River Valleys | <1% |
| Kootznoowoo Fjordlands | Stephens Passage Glaciomarine Terraces | 3% |
| Chilkat River Complex | Chilkat Complex | <1% |

**(b) Soils:** The bare rock exposed on the east side of Lynn Canal is metamorphic rock-slate, schist, and marble. This rock type is visible from Berners Bay north to Skagway. Soils in the Skagway River area are characterized generally as being shallow to bedrock soils primarily of organic and mineral origin. Soils in the Berners Bay area may range from well-developed, deep, colluvial soils on moderate to steep slopes to poorly drained, mineral and/or organic soils on benches and moderate slopes. Muskeg with reduced productivity occur on these benches. The entire area has been overridden by glaciers. A predominance of glacial materials is found throughout the area, but especially on mid to lower slopes.

**(c) Vegetation:** Due to icefields much of the area is unvegetated. In areas that have been deglaciated, the land is in various stages of plant colonization. Much of the vegetation occurs in valley bottoms and at lower elevations. In vegetated areas, lush alpine meadows, western hemlock/Sitka spruce forests, cottonwood, birch, and subalpine fir/mountain hemlock forests are typical, depending on elevation. There are 15,946 acres of alpine vegetation mapped within this roadless area. Approximately 881 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 129,669 acres mapped as forestland, of which 60,528 acres or 47 percent are mapped as productive old-growth forest. Of the productive old growth, 19,855 acres or 33 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 2,626 acres of high-volume, coarse-canopy old growth. There are approximately 32 acres of second-growth forest where beach harvest has occurred in the past.

**(d) Fish Resources:** Fish resources were rated by the Alaska Department of Fish and Game (ADF&G) in its Forest Habitat Integrity Program (1983), which described the value of individual VCUs for sport fish, commercial fish, and estuaries. Two of the VCUs that make up this area, Berners River (VCU 12) and Gilkey River (VCU 15), were rated as high value for sport fish. Four VCUs, Berners River (VCU 12), Berners Bay (VCU 16), Nuggett Creek (VCU 30), and Boundary Creek (VCU 49), were rated highly for commercial fish. None of the VCUs in this area was inventoried as having highly valued estuaries. The Tongass Fish and Wildlife Resource Assessment (ADFG, 1998) listed VCU 12 as a primary producer of pink salmon and sportfish. VCUs 13, 14, and 15 were also listed as primary salmon producers. The remaining VCUs in the area (VCUs 4, 10, 11, 18, 21, 22 and 30) were identified as non-producers.

Coho, chum, and pink salmon are found in this area, along with Dolly Varden char, steelhead, and cutthroat trout. Major drainages include the Katzehin River and the berners, Lace, Antler, and Gilkey Rivers, which flow into Berners Bay.

**(e) Wildlife Resources:** Populations of black and brown bear range primarily at the lower elevations and in timbered river drainages. Moose are also present, especially in the Berners Bay and Katzehin drainages. There are mountain goat populations located on the steeper cliffs and mountains throughout the area. Populations of wolf and wolverine also exist in the area. Portions of this roadless area are important for migratory waterfowl. Concentrations of bald eagles occur in Berners Bay in late April through mid-May. Other species found here include red squirrel, marten, river otter, Vancouver Canada goose, and Queen Charlotte goshawk.

**(5) Management Direction and Current Uses:** The area was allocated to nine Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These nine LUDs are Modified Landscape, Minerals, Transportation and Utility System (TUS), Remote Recreation, Semi-remote Recreation, LUD II, Wild River, Research Natural Area, and Old-growth Habitat. Both the Minerals and TUS LUDs are secondary LUDs, which overlay the other land uses.

| LUD | Acres |
|---|---|
| Modified Landscape | 22,469 |
| Minerals* | 15,167* |
| Transportation and Utility System | NA |
| Remote Recreation | 901,552 |
| Semi-remote Recreation | 212,718 |
| LUD II | 42,921 |
| Wild River | 10,176 |
| Research Natural Area | 8,012 |
| Old-growth Habitat | 3,625 |

* Note that acres in the Minerals LUD are included in the Modified Landscape and Old-growth LUD acres.

Approximately 2 percent of the roadless area (not including the LUD overlays) was allocated to one development LUD, Modified Landscape. The Modified Landscape LUD was assigned to approximately

2 percent of the roadless area. Lands allocated to this designation are located along the Lynn Canal shoreline north of Berners Bay. In addition, approximately 1 percent of the roadless area was allocated to the Minerals LUD overlay. This LUD overlay is located on the western border of the roadless area between Juneau and Berners Bay. The Transportation and Utility System LUD overly includes potential road and powerline corridor that runs along the Lynn Canal shoreline from Berners Bay north to Skagway.

Most of this roadless area, approximately 98 percent, was allocated to non-development LUDs (Remote Recreation, Semi-remote Recreation, LUD II, Wild River, Research Natural Area, Old-growth Habitat). Approximately 75 percent of this roadless area was allocated to the Remote Recreation LUD. The Semi-remote Recreation LUD was assigned to approximately 18 percent of the roadless area. A broad area of lands located adjacent to Berners Bay, Berners River, and Evelyn Lake was allocated to LUD II, which accounts for approximately 4 percent of the roadless area. Approximately 1 percent of the roadless area was allocated to the Wild River LUD. Two river segments, the Gilkey and Katzehin Rivers, are being managed as Wild Rivers. Approximately 1 percent of the roadless area, located in the northernmost tip of the area in Warm Pass Valley, was allocated to the Research Natural Area LUD. The Warm Pass Research Natural Area was created to recognize the northernmost example of subalpine fir and other locally rare species in the Tongass. A relatively small portion of the area, accounting for less than 1 percent of the roadless area was allocated to the Old-growth Habitat LUD.

The land allocated to the Minerals LUD overlay is known as the Juneau Gold Belt Tract, which contains deposits of gold, silver, lead, zinc, and copper. A smaller area just north of Berners Bay is also allocated to the Minerals LUD and is known as the Berners Bay Tract.

Planning is underway to develop a hydroelectric power plant, referred to as the Otter Creek Hydroelectric Project, 3 miles south of Skagway in the Kasidaya Creek watershed. A Federal Energy Regulatory Commission (FERC) license is being sought and FERC has issued a Draft EA on the project. It could be licensed in 2003. Kasidaya Creek drains into Taiya Inlet.

Goat Lake Hydroelectric plant, on Goat Lake north of Skagway, provides power to Skagway and Haines. The facility consists of a dam, penstock, powerhouse, and transmission lines.

Helicopter landing tours on the Juneau Icefield are very popular, with the number of tours increasing in general proportion with the increase in cruise ship passengers to Juneau over the last 15 years. In 2000, there were a total of 85,531 Juneau Icefield helicopter landing tour passengers. Helicopter-access activities in the roadless area include icefield landing tours, dogsled mushing, hiking, trekking, Nordic skiing tours, and mechanized snow vehicle expeditions. The Forest Service authorized commercial helicopter landing tours on the Juneau Icefield from 2002 through 2006.

Several trails provide direct access into the area. The Laughton Glacier Trail provides access to the Laughton Glacier Recreation Cabin. The Denver Glacier and Sturgills Landing Trails are in the Skagway area. The Lemon Creek, Nugget Creek, and the Heintzleman Ridge Route are trails in the Juneau area. There are two public recreation cabins in this roadless area. These are the Laughton Glacier Cabin accessible by trail from the White Pass Railroad, approximately 17 miles north of Skagway and the Berners Bay Cabin, located about 8 miles north of Echo Cove on the east side of Berners Bay.

The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that the Skagway-Juneau Icefield Roadless Area is typically not used for subsistence. Brown bear harvest was recorded in the vicinity of Berners Bay (ADF&G, 1998).

Scientific research is conducted on the Juneau Icefield through the Foundation of Glacier Research. Research camp locations include Vaughan Lewis Glacier and Nunatak Chalet. A fish weir is located on the Berners River.

The Cube Cove-Kensington Land Exchange between the Forest Service, Sealaska Corporation, and Shee Atika is in the initial proposal stage. The entities would exchange subsurface and surface rights to the private land located west of the Berners Bay LUD II area around Point Sherman. The exact boundaries of this exchange have not yet been defined.

The Forest Service's 10-Year Action Plan for the Juneau Ranger District identifies the Kensington Timber Sale with an expected decision in September 2007 and an estimated size of 25 million board feet. This sale is planned in the Modified Landscape LUD portion of the roadless area.

**(6) Appearance (Apparent Naturalness):** The vast majority of the area appears unmodified and pristine, except for the occasional camps of the Juneau Icefield Research Project and the facilities associated with mining activity. The Berners Bay area is essentially unmodified except for the few well-screened cabins and trails in the area. The area is visible from a number of locations including visual priority routes and use areas, which are identified in Section II (6). These include portions of the Alaska Marine Highway, such as Lynn Canal, Taiya Inlet, Chilkoot Inlet, and Favorite Channel, and small boat routes, including Berners, Lace, Antler, and Gilkey Rivers. The area is also visible from a number of Dispersed Recreation Areas, including Katzehin River, Laughton Glacier, and Echo Cove/Sawmill Cove. Many tourists view the spectacular scenery of this roadless area from the White Pass and Yukon Railroad without actually entering the roadless area. Views in most cases are of an unmodified landscape.

**(7) Surroundings (External Influences):** The Skagway-Juneau Icefields Roadless Area is part of a very extensive mainland roadless area that includes portions of western British Columbia. Much of this roadless area is comprised of the Juneau Icefield, which receives visual and auditory impacts from flightseeing tours, regular aircraft travel routes, and helicopter charters. In 2000, there were a total of 16,583 commercial helicopter landing tours on the Juneau Icefield.

The two active mining claims at Kensington and Jualin, adjacent to this roadless area in the Berners Bay area, also represent a human influence visible from nearby locations. As part of the development of these mines, a proposal has been made to extend Veterans Memorial Highway from Echo Cove to private land at Cascade Point where a ferry and shipping terminal would be constructed. The terminal would be used to supply personnel and equipment to the mines.

Lynn Canal serves as a major travel corridor for flights, ferries, ships, and boats, but much of the immediate area along Lynn Canal is unavailable for human activity because of the steepness of the terrain. The Katzehin public recreation cabin is accessed by wheeled aircraft on a primitive air strip near the Katzehin River. Neither the cabin or air strip are maintained by the Forest Service. The Berners Bay area is used for a variety of human uses, including recreation, mining, boating, fishing, hunting, and subsistence uses.

The roadless area is bordered to the east by the U.S./Canadian border. Glaciers cover the majority of the adjacent land on the Canadian side of the border. Atlin Provincial Park is located across the border from the Chilkoot Range.

The 1997 Juneau Access Draft EIS, prepared by the U.S. Department of Transportation, Federal Highway Administration, and State of Alaska Department of Transportation and Public Utilities, evaluated the possibility of constructing a road from Juneau to Haines/Skagway along the east side of the Lynn Canal. This proposed road would be located west of some parts of the Skagway-Juneau Icefield Roadless Area and within other parts. This project is not actively being pursued as part of Southeast Alaska's immediate transportation planning efforts.

**(8) Attractions and Features of Special Interest:** The natural features of the area including the extensive icefield, the scenery, and the opportunity to see wildlife and to study the processes that formed this country may all be considered attractions. The Icefield and numerous glaciers offer unparalleled scenery and opportunities for mountaineering, skiing, ice and rock climbing, camping, and scenic viewing. Scientific research is conducted on the Juneau Icefield through the Foundation of Glacier Research.

Fishing opportunities in the streams are a minor attraction. Several trails provide direct access into the area. The Laughton Glacier Trail to the Laughton Glacier Recreation Cabin and the Denver Glacier Trail are in the Skagway area. The Lemon Creek, Nugget Creek, and Heintzleman Ridge Route are trails in the Juneau area. There are two public recreation cabins in this roadless area, including the Laughton Glacier Cabin, accessible by trail from the White Pass Railroad approximately 17 miles north of Skagway, and the Berners Bay Cabin, located about 8 miles north of Echo Cove on the east side of Berners Bay. The area contains 18 inventoried recreation places, which cover 148,243 acres (12 percent) of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The roadless area boundaries did not change significantly between 1989 and 2003. One exception to this occurs on the north side of Berners Bay, where the boundary of the area has been slightly modified to exclude a short length of mine access road.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is generally unmodified and natural; long-term ecological processes are evident. This lack of modification and the area's extensive size generally result in the area being perceived as pristine, natural, and free from disturbances of any kind. Activities on adjacent land near Berners Bay, along with the relatively heavy recreation use, affect the apparent naturalness to some degree. The presence of helicopter tours during the cruise ship season is, however, evidence of human influence. Overall, this area 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 at locations away from air routes and landing sites within the area. Solitude is affected by the flight paths of small planes, jets, or helicopters, for short periods of time. The large number of commercial helicopter landing tours on the Juneau Icefield in 2000 (16,583) suggests that this type of air traffic could be intrusive to visitors to the area. Otherwise, the sense of solitude and remoteness can be dramatic for visitors on the Icefield. Along the shoreline of Lynn Canal, one can expect to see frequent air and water traffic, including cruise ships of all sizes, fishing and pleasure vessels, and the Alaska Marine Highway ferries. Within Berners Bay, there is less chance for solitude. Recreational boaters and kayakers frequent the area, and there are two active mining claims on the north side of the bay. In the area north of Skagway, the terrain is such that it offers a high degree of solitude once one leaves the influence of the railroad tracks of the White Pass and Yukon Railroad.

The Katzelin area provides some opportunity for solitude within the river valley. There is some airboat and small plane travel within the Katzelin River valley, generally associated with big game hunting.

Travel within the area can be extremely challenging, 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 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) | 1,077,037 | 90% |
| Semi-Primitive Non-Motorized (SPNM) | 110,719 | 9% |
| Semi-Primitive Motorized (SPM) | 7,456 | 1% |
| Roaded Natural (RN) | 3,068 | 0% |
| Roaded Modified (RM) | 1,795 | 0% |
| Urban (U) | 22 | 0% |

The area contains 18 inventoried recreation places, which cover 148,243 acres, or 12 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 3 | 92,629 |
| SPNM | 9 | 49,704 |
| SPM | 3 | 4,141 |
| RN | 2 | 965 |
| RM | 4 | 782 |
| U | 1 | 22 |

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

This roadless area generally offers many opportunities for dispersed recreation, including viewing spectacular scenery, hiking, mountaineering, ski touring, hunting, and boating. There are two public recreation cabins in the area, including the Laughton Glacier Cabin, accessible by trail from the White Pass Railroad approximately 17 miles north of Skagway, and the Berners Bay Cabin, located about 8 miles north of Echo Cove on the east side of Berners Bay. Outfitter/guide use of the area was recorded at Sawmill Creek, the Katzehin River, and Lower Antler Lake in 1999. Use levels of these areas were very low.

**(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 Skagway-Juneau Icefield Roadless Area was given a rating of 24 out of 28 possible points. The rating was re-evaluated for the updated version of the Analysis of the Management Situation. Based on this re-evaluation, the area was given a rating of 25. This rating reflects the very high potential for solitude and primitive recreation when factored with other large roadless areas adjacent to this area. A separate rating was done for the Berners Bay and the LUD II area associated with this area and received a rating of 24. The lower score represents the ongoing activities within and near the Bay and its effect on the apparent naturalness of the area. When the Berners Bay watersheds are rated separately, they rate the same (25) as the overall roadless area.

**(4) Ecologic and Geologic Values:** This area is part of a very extensive mainland roadless area that includes portions of western British Columbia. As such, it contributes to one of the largest areas of North America that has essentially only been affected by ecologic and geologic processes.

There is no vegetation in much of the area because of the icefield. Areas of old-growth forest tend to occur in valley bottoms and at lower elevations.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment listed VCUs 12, 13, 14, 15, and 46 around Berners Bay and Taku Inlet as primary salmon producers. Of the remaining VCUs in the area, approximately half were identified as secondary producers and half were identified as non-producers. VCUs 12, 12-1, 25, 25-1, and 46, located around Berners Bay and Taku Inlet, were identified as primary sport fish producers (ADF&G, 1998).

Coho, chum, and pink salmon are found in this area, along with Dolly Varden char, steelhead, and cutthroat trout. Major drainages include the Katzehin River, and the Berners, Lace, Antler, and Gilkey Rivers, which flow into Berners Bay.

The Katzehin River contains a productive run of chum salmon. Berners River has several connected streams and lakes that offer excellent anadromous fish habitat, and are considered exceptionally productive for salmonids. This river has an estimated annual peak escapement of 8,800 pink salmon and very good

coho smolt production capability (ADF&G, 1998). The Lace River has an estimated annual peak escapement of 4,400 pink salmon and very good coho smolt production capability.

The 1997 Tongass Land Management Plan recommended portions of the Gilkey and Katzehin Rivers for Wild designation in the National Wild and Scenic Rivers Program.

Fishery values in the Gilkey River drainage are considered moderate. Antler Lake, which feeds the Gilkey, contains the only known naturally reproducing population of arctic greyling in northern Southeast Alaska. The Antler River has an estimated annual peak escapement of 4,400 pink salmon and very good coho smolt production capability.

**(b) Wildlife Resources:** Populations of black and brown bear range primarily at the lower elevations and in timbered river drainages. Based on harvest data compiled from 1985 to 1995, VCUs 12, 13, and 16-1, around Berners Bay were ranked in the second 25 percent of brown bear harvest areas on the Tongass (ADF&G, 1998).

Moose are also present, especially in the Berners Bay and Katzehin drainages. Moose also occur near the foot of the Taku and Norris glaciers. Good mountain goat habitat and goat populations exist on the steeper cliffs and mountains throughout the area. Populations of Sitka black-tailed deer, wolf, and wolverine also exist in the area. Portions of this roadless area are important for migratory waterfowl.

Other species that occur here include red squirrel, marten, river otter, Vancouver Canada goose, and Queen Charlotte goshawk. U.S. Fish and Wildlife Service surveys have located 308 bald eagle nest trees within the Juneau Icefield area.

Whales and other marine mammals concentrate in Berners Bay in early May to feed on spawning eulachon. Harbor seal concentrations greater than 500 occur in Berners Bay in late April through mid-May. Reefs, sand and gravel beaches, sand and mud bars, and glacial and sea ice are commonly used for hauling sites. Seals come ashore in Berners Bay during July and August to molt.

**(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 Berners Bay. 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 and rear young from April through September in the wetlands of the Antler, Lace, and Berners River drainages that flow into Berners Bay. 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 is a small area of karst in the southwest corner of this roadless area, along the toe of the Ptarmigan and Lemon Creek Glaciers. The mapped karst resources encompass 1,438 acres (less than 1 percent) of the area. Most of the karst, approximatley 90 percent, is classified as high vulnerability. There are numerous glaciers in this area, including the Taku, Nugget Creek, Mendenhall, Hades Highway, Demorest, Matthes, Gilkey, Echo, Bucher, Thiel, Eagle, Herbert, Antler, Meade, Denver, and Laughton glaciers. Several of these glaciers are relatively unique. The Taku and Norris glaciers are tidewater glaciers; the Mendenhall empties into Mendenhall Lake on the outskirts of Juneau and the Meade Glacier produces a major braided river, the Katzehin River.

**(5) Scientific and Educational Values:** There are opportunities to observe and study fish and wildlife and the various forces that formed this landscape. The glaciers and icefield are the most significant features. Four potential Research Natural Areas (RNAs) were identified in the 1997 Tongass Land and Resource Management Plan Revision. These areas were Warm Pass, Dayebas Creek, Berners-Lace River, and Katzehin Meadows. Only the potential Warm Pass RNA was designated as an RNA in the 1997 Tongass Land and Resource Management Plan

Record of Decision. Warm Pass includes the northernmost example of subalpine fir in Alaska, which is an uncommon species in this area due to the unusual climate of Southeast Alaska.

**(6) Scenic Values:** This roadless area is basically unmodified, offers spectacular scenery, and is vast. The area is perceived to be pristine, natural, and free from disturbances of any kind. The few recreation facilities in this area serve to focus use in their immediate vicinity. Overall, the unmodified landscape dominates views from all visual priority routes and use areas. The visual character type of this roadless area is Coast Range. The scale of landforms is generally large and massive, and gives an impression of great bulk. Uplands are generally 5,000 to 7,000 feet in elevation dissected by deep, steep-walled, U-shaped valleys. Mountain ridges are generally rounded summits but are surmounted, at times, by aretes and horns rising 8,000 to 9,000 feet.

There are numerous visual priority routes and use areas identified by the Forest Plan within or adjacent to the area. These include the following travel routes: Lynn Canal (Alaska Marine Highway, Tour Ship Route, and Saltwater Use Area); Berners Bay (Small Boat Route and Saltwater Use Area); Taiya Inlet, Chilkoot Inlet, and Favorite Channel (Alaska Marine Highway); and Favorite Channel and Berners, Lace, Antler, and Gilkey Rivers (Small Boat Routes). There are also a number of visual priority use areas including Sullivan Island and Chilikat Island (State Marine Parks); Katzehin River, Laughton Glacier, Echo Cove/Sawmill Cove, and Berners Bay Head Water System (Lace, Antler, and Gilkey Rivers) (Dispersed Recreation Areas), Laughton Glacier and Berners Bay (Public Recreation Cabins); Katzehin and Glikey Rivers (Recommended Wild, Scenic and Recreational Rivers); and Denver Glacier Trail #465 (Hiking Trail). Many tourists view the spectacular scenery of this roadless area from the White Pass and Yukon Railroad without actually entering the roadless area.

Approximately 51 percent of this roadless area was inventoried in Variety Class A (possessing landscape diversity that is unique for the character type) with 40 percent in Variety Class B (possessing landscape diversity that is common for the character type). Approximately 8 percent of the area was not inventoried.

Approximately 92 percent of this area is in Existing Visual Condition (EVC) I; these areas appear to be untouched by human activity. Approximately 8 percent of the area was not inventoried.

**(7) Social, Cultural, and Historical Values:** Past uses on the Juneau Icefield include personal sporting ventures and commercially guided ventures including technical ice and rock climbing, ski touring, photography, and camping. Commercial helicopter landing tours and numerous fixed-wing craft conduct “flightseeing” tours over the Icefield and glaciers. The Oceanographic Division of the U.S. Army has conducted research on the Gilkey Glacier and its tributaries. Dr. Maynard Miller has conducted glacial research through the Foundation of Glacier Research across the entire Icefield for approximately 40 years and is currently ongoing. The Berners Bay area has evidence of gold mining activities from the early 1900s, including several old farming homesteads. In addition, Goldschmidt and Haas (1946) identified a former village and smokehouse or cabin in the Berners Bay area. Two mines, the Kensington and Jualin, have recently reopened in the Berners Bay area adjacent to the west boundary of the roadless area. Goldschmidt and Haas (1946) also identified a former smokehouse or cabin site along the Katzehin River.

This extensive roadless area, which encompasses 1.2 million acres, stretches the length of Lynn Canal and is located adjacent to the cities of Juneau and Skagway, as well as being just 3 miles from the city of Haines. The area is, therefore, relatively accessible to the residents of these cities.

The Juneau Icefield is a popular tourist destination. There were a total of 16,583 commercial helicopter landing tours on the Juneau Icefield in 2000 with an estimated 85,000 participants. The number of tours has increased in general proportion with the increase in cruise ship passengers to Juneau over the last 15 years. Helicopter-access activities in the roadless area include icefield landing tours, dogsled mushing, hiking, trekking, Nordic skiing tours, and mechanized snow vehicle expeditions.

This roadless area generally offers unparalleled opportunity for dispersed recreation, including viewing spectacular scenery, hiking, mountaineering, ski touring, hunting, and boating. There are two public recreation cabins in the area: the Laughton Glacier Cabin, accessible by trail from the White Pass Railroad approximately 17 miles north of Skagway, and the Berners Bay Cabin, located about 8 miles north of Echo Cove on the east side of Berners Bay. Outfitter/guide use of the area was recorded at Sawmill Creek, the Katzehin River, and Lower Antler Lake in 1999. Use levels of these areas are very low.

The Tongass Fish and Wildlife Resource Assessment indicated that the Skagway-Juneau Icefield Roadless Area is typically not used for subsistence. No VCUs in this roadless area were listed among the VCUs with the highest, second, or third most important community fish and wildlife values. No VCUs were listed among those VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998). Brown bear harvest was recorded in the vicinity of Berners Bay (ADF&G, 1998). The VCUs in this area were not included among those with the highest community fish and wildlife values, as 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:** The Canadian border forms the eastern boundary of the area. Most of the western boundary is Lynn Canal. The remainder of the western boundary is formed by the White Pass and Yukon Railroad, the Juneau Urban Roadless Area (# 305), and the city of Juneau and adjacent areas. The Taku-Snettisham Roadless Area (# 302) forms the southern boundary. The boundaries of the area tend to follow the outline of the Icefield and other natural landforms, with the exception of the Canadian border, which is essentially a series of straight lines. The boundaries of the Berners Bay and associated drainages are well defined, but overall management as wilderness would be influenced by ongoing uses, activities, and developments in the lower watersheds and on adjacent land.

LUD designations adjacent to the west and south sides of the area include Semi-remote Recreation, Scenic Viewshed, Old-growth Habitat, and Special Interest Area. Areas north and east of the city of Juneau and adjacent to the southern portion of the Skagway-Juneau Icefields Roadless Area were allocated to the Minerals LUD.

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

**(1) Recreation, Including Tourism Potential:** The unique terrain, scenery, and wildlife populations of this area provide unlimited recreation potential. Interest has been expressed for heli-hiking opportunities. In 1996, the Alaska Visitors Association (AVA) proposed a number of recreation facilities within the Skagway-Juneau Icefield Roadless Area. In North Side Berners Bay, Point St. Mary, and Slate Cove, they proposed a day-use recreation facility with capacity for 150 or more people, and a leased proprietary camp.

In the Upper Berners Bay drainages/Juneau Icefield area, the AVA proposed a backcountry recreation lodge with a 50-to 100-person capacity; hut-to-hut hiking, skiing, rafting, kayaking, canoeing with a 25 person/day capacity; heli-hiking/skiing for 10 to 30 person/day; a leased proprietary camp; a 500-to 1,000-square-foot equipment storage facility; flight-seeing landings for 10 to 100 persons/day; and boardwalks, paths and trails.

In the Katzehin River and Meade Glacier area, the AVA proposed flight-seeing landings for 25 persons/day; hut-to-hut hiking, rafting, skiing for 25 persons/day; a leased proprietary camp; a backcountry recreation lodge with a 50 person/day capacity; heli-hiking/ skiing for 10 to 30 person per day; and a 500-to 1,000-square-foot equipment storage facility.

The area currently receives extensive use from commercial helicopter tours, with a total of 16,583 landings recorded in 2000. Recreation use requirements under the Wilderness LUD involve limiting helicopter access to specific helicopter access areas. The proposed action presently being evaluated in the Helicopter Landing Tours on the Juneau Icefield 2003-2007 EIS (USDA Forest Service, 2001) would involve one or more special use permits for a total maximum allocation of 19,039 landings per year.

**(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:** No fisheries habitat improvement opportunities are currently identified in the this area.

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

**(5) Timber Resources:** There are approximately 60,528 acres mapped as productive old growth and 32 acres mapped as second growth due to harvest in the roadless area. Of these acres, 22,609 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), 1,722 acres or less than 1 percent of this roadless area, are estimated to be suitable for timber production. Approximately 309 of the suitable acres are mapped as high-volume old growth; of these acres, 70 are mapped as high-volume, coarse-canopy old growth. The potential for managing timber in this roadless area is limited, and extremely localized, as the majority of this area is icefields and glaciers.

The Forest Service's 10-Year Action Plan for the Juneau Ranger District identifies the Kensington Timber Sale with an expected decision in September 2007 and an estimated size of 25 million board feet. This sale is planned in the Modified Landscape LUD portion of the roadless area. Designating this area wilderness would not be likely to affect potential timber harvest activities in nearby areas because it would not block potential access into adjacent areas.

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

**(7) Minerals:** The overall area generally has a low minerals rating but much of the area between Juneau and Berners Bay was allocated to the Minerals LUD. This band is known as the Juneau Gold Belt Tract, which contains deposits of gold, silver, lead, zinc, and copper, with a gross value of $388 million. A smaller area just north of Berners Bay is also allocated to the Minerals LUD and is known as the Berners Bay Tract. This area is estimated to contain $918 million in gold deposits. The Kensington and Jualin Mines, north of Berners Bay, have current Operating Plans on file. There are several other mining claims near the mouth of Berners River. The remaining part of the river has no mining claims and is not within an area of high mineral development potential. The mouth of the Lace River has several mineral claims. Designating the entire Juneau-Skagway Roadless Area as wilderness could affect potential mining activities in the Berners Bay area by limiting mining facility development and road construction in areas that are not accessible by existing roads.

This roadless area contains 22,817 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 15,167 of these acres is 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. The Minerals LUD is also intended to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when minerals development occurs. In addition, this roadless area contains an estimated 277,692 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 46,743 of these acres are considered to have moderate potential for development.

**(8) Transportation and Utilities:** The 1997 Juneau Access Draft EIS prepared by the U.S. Department of Transportation, Federal Highway Administration, and State of Alaska Department of Transportation and Public Utilities evaluated the possibility of constructing a road from Juneau to Haines/Skagway along the east side of the Lynn Canal. This proposed road would be located west of some parts of the Juneau-Skagway Icefield Roadless Area and within other parts. This project is currently being pursued as part of Southeast Alaska's transportation planning efforts. The Forest Plan retains a proposed state road corridor and a powerline corridor along this area. The Forest Service has given the state a RS-2477 right-of-way for the road from Slate Cove in Berners Bay to the Jualin Mine.

**(9) Water Availability and Use:** Recreation, research, and mining facilities create water demand within this roadless area. The Dewey Lakes, Goat Lake, and Lemon Creek hydroelectric power plants are located within the area and an additional hydropower plant, the Otter Creek development, in the Kasidaya Creek watershed located about 3 miles south of Skagway, is seeking a FERC license. A Draft EA has been issued by the FERC for the Otter Creek project. It could be licensed in 2003.

**(10) Areas of Scientific Interest:** The Warm Pass RNA provides the opportunity to study vegetation that is rare in the area due to an unusual climate for Southeastern Alaska. Management as wilderness may restrict research activities. There are karst resources mapped in the area that encompass approximately 1,438 acres or less than 1 percent of the roadless area.

Scientific research is conducted on the Juneau Icefield through the Foundation of Glacier Research. Research camp locations include Vaughan Lewis Glacier and Nunatak Chalet.

**(11) Land Use Authorizations:** There are three cabins and one tent platform in the Berners Bay area that are currently authorized with special use permits. As noted above, a road along the east side of the Lynn Canal has been considered in the past.

**(12) Land Status:** All of the land within the roadless area is a part of the National Forest System. Near Berners Bay, a small portion of this roadless area is encumbered.

The Cube Cove-Kensington Land Exchange between the Forest Service, Sealaska Corporation, and Shee Atika is in the initial proposal stage. The entities would exchange subsurface and surface rights to the private land located west of the Berners Bay LUD II area around Point Sherman. The exact boundaries of this exchange have not yet been defined.

## IV. Wilderness Evaluation (Need for Wilderness)

**(1) Public and Congressional Interest:**

**(a) Interest Expressed by Local Users and Residents:** Use of the area is divided into at least three separate factions. Use in the Berners Bay area is relatively high because of its proximity to Juneau and the end of the Juneau Road System at Echo Cove. Boating and kayaking occur frequently in the bay.

In the portion of the roadless area that is accessed from Skagway, local users are primarily hunters and recreationists. Many tourists view the spectacular scenery of this roadless area from the White Pass and Yukon Railroad without actually entering the roadless area.

Interest is very high in viewing the icefields as thousands of visitors have viewed the Icefield using flightseeing or helicopter landing tours. The permitted number of commercial helicopter landings was in excess of 18,000 in 2000. This level of use generated over 100,000 recreation visitor days (RVDs) for 2000. The proposed action currently being evaluated in the Helicopter Landing Tours on the Juneau Icefield 2003-2007 EIS (USDA Forest Service, 2001) would involve one or more special use permits for a total maximum allocation of 19,039 landings per year. Use at this level would be inconsistent with wilderness designation.

Some individuals, and outfitters and guides with small groups have traversed the Icefield from Atlin, British Columbia to Juneau.

**(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 Juneau-Skagway Icefields Roadless Area. In 2001, HR 2908 identified the area surrounding Berners Bay as a Proposed Wilderness addition. This bill also proposed that the Berners, Lace, Antler, and Gilkey Rivers that flow into Berners Bay be designated as Wild and Scenic Rivers. It also proposed that the Katzehin River, Dayehas Creek, and Yeldagalga Creek receive Wild and Scenic River designation. The bill proposed that the remainder of the area be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

**(c) Public Input During Forest Plan Revisions and Appeals:** Berners Bay, Cowee Creek, Katzehin River, Point St. Mary, and Slate Cove were specifically addressed in public input during the Forest Plan revision and appeal. The Alaska Visitor Association proposed a number of recreation facilities in these areas. In North Side Berners Bay, Point St. Mary, and Slate Cove, they proposed a day-use recreation facility and a leased proprietary camp. In the Upper Berners Bay drainages/Juneau Icefield area, they proposed a backcountry recreation lodge; hut-to-hut hiking, skiing, rafting, kayaking, canoeing, and heli-hiking/skiing; a leased proprietary camp; an equipment storage facility; flight-seeing landings; and boardwalks, paths, and trails. In the Katzehin River and Meade Glacier area, they proposed flight-seeing landings; hut-to-hut hiking,

rafting, and skiing; a leased proprietary camp; a backcountry recreation lodge; heli-hiking/skiing; and an equipment storage facility.

The Southeast Alaska Conservation Council (SEACC) identified the Katzehin River area as an area "meriting special management protection" for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. Northwest Berners Bay was identified by another commenter as an area that should be allocated to LUD II or a similar type of protection. In addition, one commenter stated that Cowee Creek should be removed from the Mineral LUD because of the negative effects of mineral development on the area's recreation value.

Northwestern Berners Bay (VCU 20 and part of VCU 16) was identified in the October 12, 1997 appeal filed by SEACC as a "SEACC Special Area" that should be protected from development. SEACC noted in this appeal that while parts of the shoreline are protected, most of the area is still open to moderate development.

The Katzehin River, St. Mary/Point Sherman area, and the ridge between Sweeney Creek and Lynn Canal were identified in the September 24, 1997 appeal filed by Lynn Canal Conservation, Inc. (LCC). LCC proposed that the Katzehin River be identified as a Wild River under the Wild and Scenic River Act because it is used by numerous local residents and visitors, including hunters, climbers, campers, and fishermen. In addition, they noted that the Katzehin and its tributaries contain productive chum and coho salmon grounds, moose, black and brown bear, and numerous waterfowl. LCC proposed that mineral and logging development not be permitted in the St. Mary/Point Sherman area north of Berners Bay because of its importance for commercial and subsistence fishing and recreation, as well as its high value for wildlife. Mountain goat winter range on the ridge between Sweeney Creek and Lynn Canal was identified as particularly vulnerable to projects being considered in the Point Sherman 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:** Comments on the July 2001 Helicopter Landing Tours on the Juneau Icefield 2002-2006 DEIS are currently being analyzed.

**(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 the Berner's Bay watershed is one of the most important fish and wildlife habitats in this roadless area. Berners Bay is also the most vulnerable to development. Although linked peripherally to the Juneau road system, most of Berners Bay is only accessible by boat. The head of the bay is very shallow because of the silt load that has been deposited by three glacial river systems, and thus is only accessible by kayak, jet or airboat. They commented that Berners Bay still has a great deal of wilderness character because of this limited access. They indicated that they do not think the LUD II status for this high value habitat would protect the many important fish, wildlife, and wilderness values of this area.

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 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.

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 commented that the area surrounding the population center should be protected by LUD II, as these are important for recreation, subsistence, and tourism.

A Juneau Area Assemblyman recommended Berners Bay for designation as wilderness.

One individual commented that there was a sawmill and mining in Berners Bay and portions of the area have been logged and these disturbances were relatively indiscernible now. However, many individuals recommended that Berners Bay be designated wilderness.

Another individual commented that the Katzehin River watershed should be considered for wilderness protection; there are no other wildernesses that are readily accessible to Haines and Skagway.

An individual of the Auk Kwaans commented that the land around Berners Bay contain sites that are important to the Auk Kwaans for food, medicine, and a burial site. The individual requested that the land be protected as wilderness.

Many individuals called for protection of Berners Bay and others commented that the area around Berners Bay should be protected from mining. Some wanted the north side of the bay, from Point St. Mary's to Johnson Creek to be protected from timber harvesting (they are partially open now).

A few individuals commented that the entire area was deserving of long-term protection. Some recommended it 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 Skagway-Juneau Icefield is part of a larger mainland unroaded landmass that runs from the international border north of Skagway to Misty Fiords National Monument Wilderness and the international border to the south. The Taku-Snettisham and Juneau Urban Roadless Areas are located south and west of the area, respectively. The Sullivan and Chilkat-West Lynn Canal Roadless Areas are located west across Lynn Canal from the area. The Endicott River Wilderness, located west across Lynn Canal, is the closest wilderness.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 0 | 35 |
| Stika (Pop. 8,835) | 95 | 100 |
| Hoonah (Pop. 860 | 40 | 60 |
| Angoon (Pop. 572) | 60 | 90 |

The nearest stops on the Alaska Marine Highway to this area are Juneau, Skagway, and Haines.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Skagway-Juneau Icefields Roadless Area is located on the Juneau mainland and is bordered by the Canadian Border to the east, non-National Forest System land, including the city of Skagway to the north, the city of Juneau and the Taku-Snettisham Roadless Area (# 302) to the south, and Lynn Canal, and the Juneau Urban Roadless Area (# 305) to the west. The southern boundary is bounded partially by the southern edge of the Juneau Icefield above the Taku Inlet and the Taku River drainage. The area is generally characterized by a great variety of geological features with large, massive landforms. Uplands are generally 5,000 to 7,000 feet in elevation. The Juneau Icefield is the predominant landform in this area along with the resultant glaciers. In the Skagway area, the Icefield gives way to dramatic rock mountains with deep, steep-walled, U-shaped valleys. Along Taku Inlet and Lynn Canal, several tidewater glaciers, or near-tidewater glaciers, tumble down to saltwater or close to it, between precipitous cliffs and mountain walls. Hanging glaciers are the source of many beautiful waterfalls. Major river systems in the area include the Katzehin River, and the Berners, Lace, Antler, and Gilkey Rivers, which flow into Berners Bay. The Berners Bay area is characterized by these moderately large streams whose deltas form a broad intertidal flat and flow into the shallow, sandy bay.

The area is mostly unmodified and in a natural appearing condition. The natural integrity and apparent naturalness for the area is rated as very high. The apparent naturalness is lowered to high when the Berners Bay vicinity and associated LUD II area are rated separately. The total watershed area of Berners Bay has very high natural integrity and apparent naturalness. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

The area has very high scenic quality; approximately 51 percent of the landscape is considered distinctive for the character type from a scenery standpoint. There are numerous glaciers in this area, with several being relatively unique. The Taku and Norris glaciers are tidewater glaciers; the Mendenhall empties into Mendenhall Lake on the outskirts of Juneau; and the Meade Glacier produces a major braided river, the Katzehin River. Scientific research is ongoing on the Juneau Icefield. The outstanding scenery, coupled with the interest in the glaciers and icefields, make portions of the roadless area a significant tourism attraction.

The roadless area includes about 19,855 acres of high-volume, old-growth forest. Of these acres, 2,626 are mapped as high-volume, coarse-canopy old growth.

The Skagway-Juneau Roadless Area lies partially within the Ice Fields, Lynn Canal, and Northern Coast Range Biogeographic Provinces. Approximately 80 percent of the roadless area is within the Ice Fields province and makes up about 32 percent of that province. It is 1 of 9 inventoried roadless areas found in the province that collectively make up about 66 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. Another 19 percent of the roadless area lies within the Lynn Canal Province and makes up about 34 percent of the province. It is one of four inventoried roadless areas that collectively make up about 77 percent of the province. The Endicot River Wilderness makes up about 15 percent of the Lynn Canal province, and the Berners Bay LUD II area makes up another 6 percent of the province. The last 1 percent of the Skagway-Juneau Roadless Area is located within the Northern Coast Range province and makes up about 2 percent of the province. The roadless area is 1 of 6 inventoried roadless areas found in the province that collectively make up about 66 percent of the province. Portions of the Chuck River and Tracy Arm-Fords Terror Wildernesses are within the province and make up about 23 percent of the province.

The Skagway-Juneau Icefield Roadless Area lies within three ecological sections; it represents 28 percent of the Boundary Ranges Ecological Section, less than 2 percent of the Kootznoowoo Fjordlands Ecological Section, and 68 percent of the Chilkat River Complex Ecological Section within the Tongass National Forest boundary. Both the Boundary Ranges and Kootznoowoo Ecological Sections are well represented by existing wilderness (33 and 78 percent, respectively) and by other existing non-development LUDs (61 and 11 percent respectively, including 1 percent each of LUD II). The Chilkat River Complex Section does not have any land in existing wilderness; however, 95 percent is protected in other non-development LUDs with no land in LUD II.

Almost all of this roadless area (97 percent) is within the Boundary Ranges Icefields Ecological Subsection; this portion of the roadless area represents 28 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 remaining area of this roadless area is within three ecological subsections, of which the Stephens Passage Glaciomarine Terraces Ecological Subsection is most prevalent. The Stephens Passage Glaciomarine Terraces Ecological Subsection represents 3 percent of the roadless area. This portion of the roadless area represents 11 percent of the entire ecological subsection, which is well represented in existing wilderness and non-development LUDs (36 and 31 percent, respectively) with an additional portion in existing LUD II (5 percent). The Stikine-Taku River Valleys Ecological Subsection represents less than 1 percent of the Juneau-Skagway Roadless Area. This portion of the roadless area represents less than 1 percent of the entire ecological subsection. Approximately 43 percent of this ecological subsection is in existing wilderness and an additional 53 percent is protected by other existing non-development LUDs. The Chilkat Complex Ecological Subsection represents less than 1 percent of the Juneau-Skagway Roadless Area. This portion of the roadless area contains 68 percent of the entire ecological subsection within the Tongass National Forest boundary. None of this subsection is in existing wilderness or LUD II; however, 95 percent is within other existing non-development LUDs.

The Skagway-Juneau Roadless Area was rated 25 out of a possible 28 points under the 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. The Berners Bay and vicinity, including the LUD II area, was rated separately and received a score of 24. The total watershed area of Berners Bay rated 25.

There is considerable local and national support for management of the area in an unroaded condition, and some national support for wilderness designation of one portion of this area. Designation would create a very large wilderness that would connect with the Tracy Arm-Fords Terror Wilderness on the south. Designation of the area would add Congressional protection to about 68 percent of the small Chilkat Complex Ecological Subsection that is not currently represented in wilderness or LUD II. Portions of the area receive significant use by large numbers of visitors to the Juneau area and this level of use would likely not be consistent with wilderness objectives in those areas. Mineral activities in places like Berners Bay may also be inconsistent with wilderness objectives. The area contains potential road and power transmission corridors that could connect Juneau with Skagway and the Canadian road system. Other potential road corridors follow the Taku Inlet east into Canada. 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 Skagway-Juneau Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, or 4 is implemented. Approximately 98 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 2 percent. The land in the development LUDs provides an estimated 1,722 acres that are suitable for timber production (4 percent of the suitable land on the Juneau Ranger District). Approximately 70 of the suitable acres are classified as high-volume, coarse-canopy old growth. This roadless area contains 22,817 acres of land identified as a mineral activity tract having a high potential for expanding mineral exploration or development of locatable minerals. In addition, this roadless area contains an estimated 277,692 acres of undiscovered locatable mineral resources; 46,743 of the acres are considered to have moderate potential for development. Recreation and special uses would continue, including the very high tourism-related uses. The values associated with the natural settings of the roadless area, including the high scenic and geologic values, are mostly protected by the Forest Plan. The area in the vicinity of Berners Bay would allow timber management under the Forest Plan, which could affect the natural setting values in that area.

Under Alternative 2, the 42,921-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 protected under LUD II designation. The total area suitable for timber production would not change from Alternative 1. The potential for other uses and development, including recreation, some special uses, the potential road and powerline, and minerals, could be restricted in the Recommended Wilderness area. 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 LUD II portion (Berners Bay) of the roadless area, including the scenic and geologic values, would continue to be provided long-term protection if designated wilderness.

Under Alternative 5, 42,024 acres 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 protected under LUD II designation. The total area suitable for timber production would not change from Alternative 1. The potential for other uses and development, including recreation, some special uses, the potential road and powerline, and minerals, could be restricted in the Recommended Wilderness area. 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 Berners Bay portion of the roadless area, including the scenic and geologic values, would continue to be provided long-term protection if designated wilderness.

Under Alternative 6, most of the roadless area would be converted to Recommended LUD II and the remainder would be converted to Recommended Wilderness. No timber harvest would be allowed. The potential for other uses and development, including recreation, some special uses, the potential road and powerline, and minerals, could be restricted in the Recommended Wilderness area. 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 68 percent of the small Chilkat Complex Ecological Subsection that is not

currently represented in wilderness or LUD II. 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 or wilderness.

Under Alternative 7, a 248,433-acre portion of the roadless area currently allocated to Remote Recreation, Semi-remote Recreation, LUD II, Wild/Scenic/Recreation River, Old-growth Habitat, and Modified Landscape would be converted to Recommended Wilderness. No timber harvest would be allowed in the Recommended Wilderness area; there would be no lands suitable for timber production in the roadless area. The potential for other uses and development, including recreation, some special uses, the potential road and powerline, and minerals, could be restricted in the Recommended Wilderness area. 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 Berners Bay drainage part of the roadless area, including the scenic 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. No timber harvest would be allowed. The potential for other uses and development, including recreation, some special uses, the potential road and powerline, and minerals, could be 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 68 percent of the small Chilkat Complex Ecological Subsection that is not currently represented in wilderness or LUD II. 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.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 301 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | 42,921 | | | 42,024 | 248,438 | 248,433 | 1,201,474 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | 8,012 | 8,012 | 8,012 | 8,012 | 8,012 | | 8,012 | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | 901,552 | 901,552 | 901,552 | 901,552 | 901,535 | | 728,347 | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | 3,625 | 3,625 | 3,625 | 3,625 | 3,625 | | | |
| Semi-remote Recreation | 212,718 | 212,718 | 212,718 | 212,718 | 212,688 | | 210,833 | |
| Recommended LUD II | | | | | | 953,035 | | |
| LUD II | 42,921 | | 42,921 | 42,921 | 944 | | | |
| Wild, Scenic, Recreational River | 10,176 | 10,176 | 10,176 | 10,176 | 10,176 | | 5,850 | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | 22,469 | 22,469 | 22,469 | 22,469 | 22,469 | | | |
| Timber Production | | | | | | | | |
| **TOTAL** | **1,201,474** | **1,201,474** | **1,201,474** | **1,201,474** | **1,201,474** | **1,201,474** | **1,201,474** | **1,201,474** |
| Suitable Timber Lands | 1,722 | 1,722 | 1,722 | 1,722 | 1,722 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Taku-Snettisham (302)

**ACRES (NFS):** 685,712

**BIOGEOGRAPHIC PROVINCE:** Ice Fields and Northern Coast Range

**ECOLOGICAL SECTION:** Boundary Ranges and Inside Passage Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 24

## I. Overview and Description

**(1) Location and Access:** The Taku-Snettisham 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 extends north from the Tracy Arm-Fords Terror Wilderness and is bordered to the north by the Skagway-Juneau Icefield Roadless Area. Stephens Passage and two major river inlets, Taku Inlet and Port Snettisham, border the area to the west. The area is separated from saltwater by an electric transmission line corridor in a number of locations. In addition, the northern portion of the area is separated from the Rhine Roadless Area by an electric transmission line that runs from the Annex Creek hydroelectric power plant to Juneau. The U.S./Canadian border forms the east boundary to the area. Juneau, located immediately west of the northern portion of the area, is the closest community.

This large area is accessed by a variety of means. The Taku River serves as a major river corridor for recreational boats, providing access to public and private recreation cabins and public and private inholdings located in the area. It also provides access to Taku Lodge, a commercial restaurant lodge located on the river. Access to the area by boat is also possible via Port Snettisham, Speel Arm, and Whiting River. Floatplanes land on the Taku River, the inland lakes, and the ports and bays included in the area. Helicopters are used to access various interior points, although they are used less frequently than floatplanes or wheeled planes.

The existing trail in the area goes from the Taku River to the west side of Turner Lake. There are unimproved roads located south of Taku Lodge and on Grizzly Bar. Several trails outside the roadless area provide access to its boundaries. These include Sheep Creek Trail, which originates from Thane Road, northeast of Juneau, and trails leading to Sunny Cove and Annex Lakes on the north side of Taku Inlet. Access to the immediate vicinity of the area is also provided by the privately owned Snettisham Landing Strip and the access road leading from Speel Arm to Long Lake.

**(2) History:** This large 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. Uses of the area since the 1800s include mining, fox farming, logging and milling, and settling. Remains of structures and other human cultural activity, in varying degrees of deterioration, can still be found. Goldschmidt and Haas (1946) identified former villages, camps, and a cemetery within the area.

The Taku River system is considered to be one of the premier fisheries in Southeast Alaska and historically has been very productive.

**(3) Geography and Topography:** The area is typical of recently glaciated mainlands of Southeast Alaska. It is mountainous with deep fiords and inshore islands characteristic of a submerged coastline. Many of the shorelines are rocky and difficult to access, especially in Stephens Passage. There are 154 miles of shoreline on saltwater. A large part of the area is alpine tundra (15,946 acres), ice and snow (122,734 acres), and rock (168,994 acres). There are 210 islands and islets (190 of which are greater than 10 acres) covering 4,902 acres. Large lakes in the area include Turner Lake, Lake Dorothy, Twin Glacier Lake, Lower Sweetheart Lake, Upper Sweetheart Lake, Crater

Lake, and Crescent Lake. Major river systems include the Taku, Speel, and Whiting Rivers. Freshwater lakes cover 9,022 acres in this area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. This area is located within the Ice Fields and Northern Coast Range Provinces. The Ice Fields Province is generally characterized by permanent ice fields, active glaciers, and nunatuks (mountain peaks between glaciers). This province encompasses the glaciated inland portions of the area. The remainder of 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 Taku-Snettisham Roadless Area is contained mostly within the Boundary Ranges Ecological Section (M246B) and contains portions within the Inside Passage Fjordlands Ecological Section (M247E). These areas are represented by three ecological subsections (see table below). The Boundary Ranges Icefields Ecological Subsection represents the majority of the Taku-Snettisham 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. The Holkam Bay Complex Ecological Subsection covers 13 percent of the roadless area and is located in its southwestern portion. It is represented by somewhat rugged glaciated mountains with forested slopes on mostly productive soils. Poorly drained soils dominate the lowlands. Rolling hills and glacial till are generally absent (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Boundary Ranges | Boundary Ranges Icefields | 83% |
| | Stikine-Taku River Valleys | 4% |
| Inside Passage Fjordlands | Holkam Bay Complex | 13% |

**(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 (2,330 acres). 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 15,946 acres of alpine vegetation mapped in this area.

There are approximately 208,599 acres mapped as forest land, of which 99,498 acres or 48 percent are mapped as productive old-growth forest. Of the productive old growth, 35,562 acres or 36 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 6,019 acres of high-volume, coarse-canopy old growth. There are 99 acres of second growth where beach harvest has occurred in the past.

**(d) Fish Resources:** Fish resources were rated as part of the Alaska Department of Fish and Game's (ADF&G) Forest Habitat Integrity Program (1983) and Tongass Fish and Wildlife Resource Assessment (1998). Four VCUs in the area were rated as high value for sport fish, eight were rated as highly valued for commercial fish, and three were rated highly for estuary values. The Resource Assessment listed two VCUs as primary salmon producers, three VCUs as primary sportfish producers, and four VCUs as non-producers.

The rivers and streams in this area support all five species of salmon; Dolly Varden char; cutthroat, rainbow, and steelhead trout; arctic grayling; and eulachon. Major fish-bearing waters include Taku River, Yehring Creek, Turner Lake, Speel River, and Whiting River.

**(e) Wildlife Resources:** Generally, the roadless area provides good habitat for moose, Sitka black-tailed deer, and mountain goats. Other large mammal species include both black and brown bear. Furbearers such as mink, marten, and beaver are also present.

**(5) Management Direction and Current Uses:** The area was allocated to ten Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These 10 LUDs are Scenic Viewshed, Modified Landscape, Timber Production, Minerals, Transportation and Utility System (TUS), Semi-remote Recreation, Remote Recreation, Old-growth Habitat, Research Natural Area, and Municipal Watershed. The Minerals and Transportation and Utility System LUDs are secondary LUDs, which overlay the other land uses.

| LUD | Acres |
|---|---|
| Scenic Viewshed | 25,414 |
| Modified Landscape | 21,841 |
| Timber Production | 18,973 |
| Minerals* | 1,610* |
| Transportation and Utility System | NA |
| Semi-remote Recreation | 384,032 |
| Remote Recreation | 208,094 |
| Old-growth Habitat | 18,409 |
| Research Natural Area | 8,667 |
| Municipal Watershed | 282 |

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

Approximately 10 percent of the roadless area (not including the LUD overlays) was allocated to one of three LUDs (Modified Landscape, Scenic Viewshed, and Timber Production) that allow timber production and associated road construction. Approximately 4 percent of the roadless area was allocated to the Scenic Viewshed LUD. The Modified Landscape LUD was assigned to approximately 3 percent of the roadless area. Approximately 3 percent of the roadless area was allocated to the Timber Production LUD. Less than 1 percent of the roadless area was allocated to the Minerals LUD overlay. The Transportation and Utility System LUD overlay runs along both sides of Taku Inlet to the U.S./Canadian border, for potential road locations.

Most of the roadless area, approximately 90 percent, was allocated to non-development LUDs (Semi-remote Recreation, Remote Recreation, Old-growth Habitat, Research Natural Area, Municipal Watershed). The east portion of the area is allocated to the Semi-remote and Remote Recreation LUDs. The Semi-remote Recreation LUD accounts for approximately 56 percent of the roadless area. Approximately 30 percent of the roadless area was allocated to the Remote Recreation LUD. A number of areas along and near the west shoreline of the area were allocated to the Old-Growth LUD, which accounts for approximately 3 percent of the roadless area. Approximately one percent of the roadless area, located in the upper Limestone Creek area, was allocated to the Research Natural Area LUD. This area, known as Limestone Inlet RNA, was established in 1951 when it was considered the most pristine drainage in the northern mainland coast. It represents typical vegetation types common to the Juneau mainland, including many avalanche chutes and a mainland stream with a good fish population. A small area adjacent to the Juneau city boundary was allocated to the Municipal Watershed LUD, making up less than 1 percent of the roadless area.

The existing trail in the area goes from the Taku River to the west side of Turner Lake. There are unimproved roads located south of Taku Lodge and on Grizzly Bar. There are three public recreation cabins in the area, including West Turner Lake, East Turner Lake, and Taku Glacier. There are two recreation residences under special use permit. The Whiting River has been used for guided rafting trips. Outfitter/Guides served a total of 1,525 clients in and around this roadless area in 1999. The most popular locations for outfitter/guide activities were Williams Cove (999 clients) and Gilbert Bay (269 clients). Hiking was the main outfitter/guide activity pursued in the Taku-Snettisham Roadless Area.

The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that the Taku-Snettisham Roadless Area is typically not used for subsistence.

A utility corridor (under a Memorandum of Understanding with Alaska Power Authority) parallels the coastline from the Snettisham hydroelectric plant at the head of Port Snettisham north to Juneau. The Annex Creek hydro power plant is located on the north side of Taku Inlet in the vicinity of Annex Creek. An electric powerline extending from this area to Juneau forms the south boundary of the north portion of the Taku-Snettisham Roadless Area.

A hydroelectric plant is proposed for the Lake Dorothy area. The facility will include roads, penstock, buildings, and a gravel staging area. A Preliminary Draft EA has been issued for the Lake Dorothy Hydroelectric Project. Special use permits for crab pot storage and for shoretie (mooring) lines have been issued for Limestone Inlet. There is also a special use permit for a FAA radio site on Williams Mountain. The 1997 Tongass Land and Resource Management Plan Revision EIS identified and approved a communication site on Speel Point. To date, the site has not been developed.

There are several fisheries projects located in the area. These projects are mainly fish barriers located within the Taku River watershed. Limestone Inlet has been identified as an area of scientific research value and designated as a Research Natural Area.

The Tongass National Forest's 10-year Action Plan identified a proposed Gilbert Bay timber sale of 20 MMBF with a decision due in 2003. One hundred percent of this proposed sale would be in the roadless area. This timber sale would not be possible if the area were designated wilderness.

**(6) Appearance (Apparent Naturalness):** A vast majority of the area is considered unmodified. Modification within the roadless area is primarily limited to the three public recreation cabins located on south side of Taku Inlet and the historic sites, including mining claims, settlements, and cabins, located throughout the area. Development has, however, occurred along parts of the shoreline that border the area. These developments, which include hydropower plants and electric transmission lines, are visible at the major entrance points to the area and also from some locations within the area.

**(7) Surroundings (External Influences):** The Taku-Snettisham 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 extends north from the Tracy Arm-Fords Terror Wilderness and is bordered to the north by the Skagway-Juneau Icefield Roadless Area. Stephens Passage and two major river inlets, Taku Inlet and Port Snettisham, border the area to the west. The area is separated from saltwater by electric transmission line corridors in a number of locations. In addition, the northern portion of the area is separated from the Rhine Roadless Area by an electric transmission line that runs from the Annex Creek hydroelectric power plant to Juneau. The U.S./Canadian border forms the east boundary to the area.

There is public and private land adjacent to this roadless area. These areas are primarily located along the Taku River at Taku Point (three parcels) and also on the north side of Speel Arm in the vicinity of Long and Crater Lakes. There is also a privately owned parcel along Yehring Creek. Boat traffic is common in the Taku River corridor, and during the summer months, there is frequent air traffic. Flightseeing tours are offered over a number of glaciers, including Taku, Hole-in-the Wall, and Twin Glaciers near the Taku River. Taku Lodge also generates floatplane traffic. The Annex Creek hydroelectric power plant located on the north side of Taku Inlet in the vicinity of Annex Creek is a readily apparent external influence from some locations within the area. External influences in the

Snettisham area include the Snettisham hydroelectric power plant and the adjacent fish hatchery, as well as the associated air and boat traffic. A gravel airstrip is located adjacent to the Snettisham power plant and fish hatchery.

The electric transmission lines that run from the Snettisham and Annex Creek hydroelectric power plants follow sections of the shoreline and are particularly apparent to visitors accessing the area from saltwater. These electric transmission lines are also visible from locations within the area.

**(8) Attractions and Features of Special Interest:** 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 several trails and three public recreation cabins in this roadless area. In addition, Limestone Inlet has been identified as an area of scientific research value and designated as a Research Natural Area. The area contains 25 inventoried recreation places, which cover 108,143 acres, or 16 percent of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The boundaries of this area have changed between 1989 and 2003 in three main ways. First, the 2003 boundaries exclude developed areas that were included within the 1989 boundaries. Second, non-National Forest System inholdings have expanded in two locations. An existing area of non-National Forest System land adjacent to the Taku River has expanded and there is a new area of non-National Forest System land located on the north side of Speel Arm in the vicinity of Long and Crater Lakes. Third, an area that was formerly part of the Taku-Snettisham Roadless Area has been identified as a separate roadless area. This area, located on the north side of the mouth of Taku Inlet and separated from the northern portion of the Taku-Snettisham Roadless Area by an electric transmission line corridor, is now the Rhine Roadless Area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area itself is generally unmodified and natural and long-term ecological processes operate unimpeded. The trails and public recreation cabins in the area have small, localized effects, but the influence of these developments on the natural integrity and apparent naturalness of the area is low. Therefore, this area is suitable for wilderness classification.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high 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 area. The character of the landforms generally allows visitors to feel remote from the sights and sounds of human activity with some exceptions. Impacts from motorized traffic are confined primarily to saltwater corridors and those inland locations overflown by floatplanes accessing the area.

Travel within the area can be extremely challenging, 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 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) | 466,462 | 68% |
| Semi-Primitive Non-Motorized (SPNM) | 182,728 | 27% |
| Semi-Primitive Motorized (SPM) | 26,993 | 4% |
| Roaded Natural (RN) | 6,697 | 1% |
| Roaded Modified (RM) | 2,079 | 0% |

The area contains 25 inventoried recreation places, which cover 108,143 acres, or 16 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 8 | 27,270 |
| SPNM | 6 | 51,988 |
| SPM | 6 | 23,111 |
| RN | 5 | 5,069 |
| RM | 2 | 705 |

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

Outfitter/Guides served a total of 1,525 clients in and around this roadless area in 1999. The most popular locations for outfitter/guide activities were Williams Cove (999 clients) and Gilbert Bay (269 clients). Hiking was the main outfitter/guide activity pursued in the Taku-Snettisham Roadless Area. There are five trails and three public recreation cabins 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 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 Taku-Snettisham 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 24. This rating reflects the high opportunities for solitude and primitive recreation, especially when the large adjacent roadless lands are factored in.

**(4) Ecologic and Geologic Values:** This area is part of a very extensive mainland roadless area that includes portions of western British Columbia. As such, it contributes to one of the largest areas of North America that has essentially only been affected by ecologic and geologic processes.

There is limited vegetation in much of the area due to the glaciated and mountainous terrain. Areas of old-growth forest tend to occur along the shorelines and at lower elevations.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment listed two VCUs (46 and 61 along Taku Inlet and Whiting River respectively) as primary salmon producers, three VCUs (43, 46, and 59) as primary sportfish producers, and only 4 of the 28 VCUs (42, 45, 48, and 54) as non-producers (ADF&G, 1998).

The glacial Taku River is significant for fish production on an international scale, primarily for pink, chinook, coho, sockeye, and chum salmon. The commercial fishery is regulated under the United States-Canada Pacific Salmon Treaty as one of the three major transboundary river fisheries on the Tongass National Forest. According to the Tongass Land Management Plan Revision EIS (USDA Forest Service, 1997), the river also supports populations of Dolly Varden char; cutthroat, rainbow, and steelhead trout; arctic grayling; and eulachon. The Taku River is considered extraordinarily productive for fish, especially pink salmon, and is a valuable commercial fishery for both Canada and Alaska. Yehring Creek, a tributary to the Taku River, provides rearing habitat for coho and sockeye salmon, and supports sea-run cutthroat and spring-run steelhead. Turner Lake supports populations of cutthroat trout, Dolly Varden char, and kokanee salmon. Crescent Lake, at the head of Whiting River, supports a good population of rainbow trout.

Information from the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicates that Turner Lake, Taku River, Speel River, and Whiting River are major salmon producers in this area, with estimated annual peak escapements of 7,000, 19,800, 4,400, and 4,400 pink salmon, respectively. Taku,

Speel, and Whiting Rivers have also been identified as having very good coho salmon smolt production capability.

A fishpass on Davidson Creek was completed in 1990 and monitoring of the site is ongoing. Snettisham Fish Hatchery is a major State fish hatchery adjacent to the roadless area. Sweetheart Lake is a popular personal use and subsistence fishery.

**(b) Wildlife Resources:** Generally, the roadless area provides good Sitka black-tailed deer, moose, and goat habitat, and these species are present within the area. Other large mammal species include wolves and both black and brown bear. Based on harvest data compiled from 1985 to 1995, VCUs 53 and 61 along Whiting River and Taku Harbor, respectively, were ranked in the second 25 percent of brown bear harvest areas on the Tongass. During the same survey period, VCUs 46 and 57 along Taku Inlet and Gilbert Bay, respectively, were ranked in the second 25 percent of black bear harvest areas on the Tongass (ADF&G, 1998). Furbearers such as mink, marten, and beaver are also present. The Taku River is important moose habitat in the Juneau 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 and Steller sea lions have been observed hauling out on the shoreline of the Taku River. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area, including the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans, which nest in the lowlands on small lakes and along large rivers and winter in ice-free areas, have been observed within the 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 have been observed in the area. They 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 is a small area of high vulnerability karst in the southeast corner of this roadless area, near Mt. Brundage. The karst resources encompass approximately 5,393 acres, or 1 percent of the roadless area. Approximately 90 percent of the karst is mapped as high vulnerability. There are numerous glaciers, including tidewater glaciers, in this area. These include parts of Norris and Taku glaciers, as well as Hole-in-the-Wall, West Twin, East Twin, and Wright Glaciers. There are no other known unique geologic features.

**(5) Scientific and Educational Values:** There are opportunities to observe and study fish and wildlife and the various forces that formed the mountains in the area. Limestone Inlet Research Natural Area has typical vegetation types common to the Juneau mainland, including many avalanche chutes and a mainland stream with a good fish population. The minor and major glaciers visible throughout the area are also significant attractions. The north portion of the area is adjacent to the city of Juneau and is, as a result, relatively accessible to school-age children.

**(6) Scenic Values:** A vast majority of the area is considered unmodified and the scenery is generally considered to be spectacular. Modification within the roadless area is primarily limited to the three public recreation cabins located on south side of Taku Inlet and the historic sites, including mining claims, settlements, and cabins, located throughout the area. Development has, however, occurred along parts of the shoreline that border the area. These developments, which include hydropower plants and electric transmission lines, are visible at the major entrance points to the area and also from some locations within the area.

The visual character type of this roadless area is Coast Range. Landforms are generally large, massive, and give an impression of great bulk. Uplands are generally 5,000 to 7,000 feet in elevation dissected by deep, steep-walled, U-shaped valleys. Mountain ridges are generally rounded summits but are surmounted, at times, by aretes and horns rising 8,000 to 9,000 feet. The large, saltwater fiords protruding into this character type are sometimes extremely steep-sided, affording great visual relief because of the abrupt differences in elevation.

There are numerous Visual Priority Routes and Use Areas identified by the Forest Plan within or adjacent to the area. These include the following travel routes: Stephens Passage (Alaska Marine Highway, Tour Ship Route, and

Small Boat Route) and Taku Inlet, Port Snettisham, Gilbert Bay, Whiting Inlet, Whiting River, Williams Cove, Turner Creek, Taku River and Inlet, Hole-in-the-Wall Glacier, Twin Glacier Lake, Yehring Creek, and Wright River (Small Boat Routes). There are also a number of Visual Priority Use Areas in the area including Taku and Whiting Rivers (Dispersed Recreation Areas); Taku Inlet, Turner Lake West, and Turner Lake East (Public Recreation Cabins); Taku Lodge (Private Resort); and Gilbert Bay, Limestone Inlet, Star Point, and Mallard Cove (Boat Anchorage).

Approximately 33 percent of the roadless area was inventoried in Variety Class A (possessing landscape diversity that is unique for the character type). A majority of the area, approximately 64 percent, was inventoried in Variety Class B (possessing landscape diversity that is common for the character type) and 1 percent of the acreage was inventoried Variety Class C (possessing a low degree of landscape diversity). Approximately 3 percent of the area was not inventoried for Variety Class. A majority of the roadless area, approximately 97 percent, is in Existing Visual Condition (EVC) I; these areas appear to be untouched by human activity. Approximately 3 percent of the area was not inventoried for EVC.

**(7) Social, Cultural, and Historical Values:** The Taku-Snettisham Roadless 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. Uses of the area since the 1800s include mining, fox farming, logging and milling, and settling. Remains of structures and other human cultural activity, in varying degrees of deterioration, can still be found. Goldschmidt and Haas (1946) identified former villages, camps, and a cemetery within the area. Juneau, located immediately east of the northern portion of the area, is the closest community.

Existing trails in the area include four trails that are accessed from Taku Inlet and River. These trails lead to Twin Glacier Lake, the west side of Turner Lake, and Taku Lodge. There is also an unimproved road located south of Taku Lodge. The fourth trail in this area runs inland from a point just north of Greely Point. A fifth trail is located in the southern portion of the area on the north shore of the Snettisham Peninsula. There are three Forest Service recreation cabins in the area, including West Turner Lake, East Turner Lake, and Taku Glacier. There are two recreation residences under special use permit. Outfitter/Guides served a total of 1,525 clients in and around this roadless area in 1999. The most popular locations for outfitter/guide activities were Williams Cove (999 clients) and Gilbert Bay (269 clients). Hiking was the main outfitter/guide activity pursued in the Taku-Snettisham Roadless Area.

The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that the Taku-Snettisham Roadless Area is typically not used for subsistence. Only one VCU along Port Snettisham, VCU 55, was listed among the VCUs with the highest community fish and wildlife values and no VCUs were listed as having the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998). Black and brown bear harvest was recorded in several VCUs within the area (ADF&G, 1998). One of the VCUs in this area, VCU 55, was identified as one of the highest fish and wildlife value community use areas by ADF&G in 1996 in their comments on the Tongass Land Management Plan Revision EIS.

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area has a mixture of natural and man-made boundaries. The north and south boundaries that separate the area from the Juneau Icefields Roadless Area and the Tracy Arm-Fords Terror Wilderness, respectively, generally follow natural landforms. While the area is generally bounded by saltwater to the west, electric transmission line corridors and other developments along the shoreline form man-made boundaries in a number of locations. In addition, part of the northern portion of the area is separated from the adjacent Rhine Roadless Area by an electric transmission line. The Canadian border, which forms the east boundary of the area, is essentially a series of straight lines.

LUD designations adjacent to the north boundary of the area include Semi-remote and Remote Recreation. The area adjacent to the south boundary of the area is allocated to the Wilderness LUD.

Designating this area wilderness would extend the Tracy Arm-Fords Terror Wilderness north. The feasibility of management in a roadless condition is high in much of the area. However, the electric transmission line corridors and other shoreline developments that border parts of the area may affect the wilderness attributes of nearby parts of

the area, as well as providing evidence of human activities to visitors accessing the area via Taku Inlet or Port Snettisham.

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

**(1) Recreation, Including Tourism Potential:** The values that attract users to this area are a sense of solitude, natural beauty, viewing and/or harvesting fish and wildlife, and relatively easy accessibility from Juneau. The area provides unlimited primitive and semi-primitive recreation opportunities. Because of the rugged terrain, use is concentrated but additional trails and recreation cabins would disperse, and possibly increase, use of the area.

In 1996, the Alaska Visitors Association (AVA) proposed a number of recreation developments within the Taku-Snettisham Roadless Area. These proposals included a small cruise ship boardwalk with a 25 person capacity for Gilbert Bay. They also included a backcountry recreation lodge with a 150 person capacity, hut-to-hut hiking, canoeing and kayaking for 25 persons, heli-hiking for 30 persons, a small cruiseship shorewalk for 25 persons, and boardwalks, paths and trails in the Sweetheart Bay and Williams Cove area. The AVA also proposed similar recreation developments along the Whiting River, including a backcountry recreation lodge with a 50 person capacity, hut-to-hut hiking, canoeing, rafting, kayaking for 25 persons, a leased proprietary camp, and flight seeing landings.

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

**(3) Fish Resources:** A fishpass on Davidson Creek was completed in 1990 and monitoring is ongoing. The Tongass Land Management Plan Revision EIS (1997) does not identify any fish habitat enhancement projects in the area. However, the potential for additional projects in this area does exist.

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

**(5) Timber Resources:** There are approximately 99,498 acres mapped as productive old growth and 99 acres of second growth in the roadless area. Of these acres, 52,695 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), 4,027 acres or less than one percent of this roadless area are estimated to be suitable for timber production. Approximately 1,347 of the suitable acres are mapped as high-volume old growth; of these acres, 313 are mapped as high-volume, coarse-canopy old growth. The potential for managing timber in this roadless area is dependent on the development of high market values and harvest methods that would allow extraction without need for extensive roading.

The Tongass National Forest's 10-year Action Plan identified a proposed Gilbert Bay timber sale of 20 MMBF with a decision due in 2003. One hundred percent of this proposed sale would be in the roadless area. This timber sale would not be possible if the area were designated wilderness.

**(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. There are currently several known claims in the area. The area around Grizzly Bar on the north shore of Taku Inlet has over 70 claims, some where exploration work has been done in recent years. The USGS has also mapped a Class IV tract of undiscovered mineral potential in the upper Taku River near the Canadian border, with a Gross-In-Place Value of less than $4,000 per acre. The south bank of the Whiting River near the mouth is on the very north edge of the Sumdum mineralized zone, a Priority 3 area for mineral development potential. The upper part of Whiting River also has tracts of Class III and IV undiscovered mineral potential. Designating this area wilderness would withdraw these lands from mineral entry, subject to valid existing rights.

This roadless area contains 15,911 acres of land identified as mineral activity tracts. Approximately 3,013 of those acres are considered to have medium to high potential for expanding mineral exploration or development of

locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). A total of 1,610 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. The Minerals LUD is also intended to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when minerals development occurs. In addition, this roadless area contains an estimated 187,951 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:** Proposals occasionally surface to build a road from Juneau to an outside road system in Haines, Skagway, or Canada. In the late 1980s, a bill was proposed in the Alaska State Legislature to fund an environmental impact statement to analyze such a proposal to construct a road to Canada through the Taku River Valley or a road to Haines. The LUD map that accompanied the 1997 Tongass Land and Resource Management Plan Revision EIS identified proposed State road corridors extending east along both sides of Taku Inlet and River into Canada. This potential road was not included in the March 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999). However, the Southeast Conference includes a route up the Taku River in its long-term transportation considerations. This potential road corridor would likely not be possible if the area were designated wilderness.

Existing powerlines extend from the Snettisham and Annex Creek hydroelectric projects toward Juneau. A potential intertie with these lines is also planned for a future hydroelectric project on Lake Dorothy, near the mouth of Taku Inlet.

**(9) Water Availability and Use:** The three public recreation cabins located in the area and the privately owned Taku Lodge generate a very small demand for water for domestic use. A small area (282 acres) adjacent to the Juneau city boundary was allocated to the Municipal Watershed LUD in the 1997 Tongass Land and Resource Management Plan. Hydroelectric facilities located adjacent to the area include the Annex Creek and Snettisham hydroelectric power plants. Proposals currently exist to develop a new hydroelectric power plant at Lake Dorothy. A Preliminary Draft EA has been issued for the Lake Dorothy Hydroelectric Project. Designating the area wilderness would prevent the development of this hydroelectric plant.

**(10) Areas of Scientific Interest:** The Limestone Inlet Research Natural Area is in this roadless area and managed as an RNA since 1971. Management as wilderness may restrict the research activities. The Yehring Creek area has been identified as a potential Research Natural Area. There are approximately 5,393 acres, or 1 percent of the roadless area, mapped as karst resources.

**(11) Land Use Authorizations:** A utility corridor (under a Memorandum of Understanding with Alaska Power Authority) parallels the coastline from the Snettisham hydroelectric plant at the head of Port Snettisham north to Juneau. The Annex Creek hydro power plant is located on the north side of Taku Inlet in the vicinity of Annex Creek. An electric powerline extending from this area to Juneau forms the south boundary of the north portion of the Taku-Snettisham Roadless Area.

A hydroelectric plant is proposed for the Lake Dorothy area. The proposal includes construction of roads, penstock, buildings, and a gravel staging area.

Special use permits for crab pot storage and for shoretie (mooring) lines have been issued for Limestone Inlet. There is also a special use permit for a FAA radio site on Williams Mountain.

The 1997 Tongass Land and Resource Management Plan Revision EIS identified and approved a communication site on Speel Point. To date, the site has not been developed.

**(12) Land Status:** This roadless area contains encumbered land, near Jaw Point, Dorothy Lake, and the Taku Lodge.

## 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 prospecting activity is occurring on Grizzly Bar. 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 Taku-Snettisham Roadless Area. In 2001, HR 2908 identified the south portion of the area as a Proposed Wilderness Addition. The bill identified the north portion of the area as a proposed LUD II addition. The bill also proposed that Taku Inlet and River and Whiting River receive Wild and Scenic River designation.

**(c) Public Input During Forest Plan Revisions and Appeals:** Gilbert Bay, Williams Cove, Taku River, Port Snettisham, Whiting River, Dorothy Lake, and Limestone Inlet were specifically addressed in public input received during the Forest Plan revision and appeal. The AVA proposed a number of recreation developments within the Taku-Snettisham Roadless Area. These proposals included a small cruise ship boardwalk on Gilbert Bay. They also included a backcountry recreation lodge, hut-to-hut hiking, canoeing and kayaking, heli-hiking, a small cruise ship shorewalk, and boardwalks, paths, and trails in the Sweetheart Bay and Williams Cove area. The AVA also proposed similar recreation developments along the Whiting River, including a backcountry recreation lodge, hut-to-hut hiking, canoeing, rafting, kayaking, leased camp, and flight seeing landings.

A number of people commenting addressed Taku Inlet and River. The majority of comments requested that the scenic and recreation values of the area take precedence over logging and other development activities, including the proposed transportation corridor. Another comment requested that road development or access not be restricted in this area.

Comments addressing the Port Snettisham and Whiting River areas requested that Port Snettisham be managed for its scenic and recreational values. The Whiting River was identified as having excellent wilderness values and low timber values and it was recommended that it be classified as "wilderness recreation." Another comment requested that Taku Harbor and Limestone Inlet be managed for their scenic and boating values and at a minimum allocated to the Scenic Viewshed LUD.

One commenter requested that Management Area C10, which encompasses the southern portion of the area, be managed as either Wilderness, Primitive Recreation, or Old-growth. Timber industry comments, on the other hand, identified the western half of Management Area 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.

**(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 commented that the addition of the Taku, Speel, and Whiting River watersheds, and the Snettisham Peninsula would enhance the fish, wildlife, recreational, and wilderness values of the Tracy Arm/Ford's Terror Wilderness.

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 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. 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.

A number of individual commenters identified Taku Harbor as an area in need of protection and some recommended the entire roadless area. Some recommended it 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 Juneau-Skagway Icefield and Rhine Roadless Areas (301 and 313, respectively) border the northern portion of the area. The Tracy Arm-Fords Terror Wilderness forms the area's south boundary. These three areas combined comprise a large mainland roadless area approximately 2.5 million acres in size.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 0 | 15 |
| Stika (Pop. 8,835) | 80 | 180 |
| Hoonah (Pop. 860 | 40 | 80 |
| Angoon (Pop. 572) | 40 | 105 |

The nearest stop on the Alaska Marine Highway is Juneau.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Taku-Snettisham 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 extends north from the Tracy Arm-Fords Terror Wilderness and is bordered to the north by the Skagway-Juneau Icefield Roadless Area. Stephens Passage and two major river inlets, Taku Inlet and Port Snettisham, border the area to the west. The area is separated from saltwater by an electric transmission line corridor in a number of locations. In addition, the northern portion of the area is separated from the Rhine Roadless Area by an electric transmission line that runs from the Annex Creek hydroelectric power plant to Juneau. The U.S./Canadian border forms the east boundary to the area. The area is typical of recently glaciated mainlands of Southeast Alaska. It is mountainous with deep fjords and inshore islands characteristic of a submerged coastline. Many of the shorelines are rocky and difficult to access, especially in Stephens Passage. Large lakes in the area include Turner Lake, Lake Dorothy, Twin Glacier Lake, Lower Sweetheart Lake, Upper Sweetheart Lake, Crater Lake, and Crescent Lake. Major river systems include the Taku, Speel, and Whiting Rivers.

This large roadless area is mostly unmodified and natural appearing. The natural integrity and apparent naturalness of the area is very high. The opportunity for solitude and primitive recreation is very high.

The area has high scenic quality; approximately 33 percent of the landscape is considered distinctive from a scenery standpoint. There are numerous glaciers, including tidewater glaciers, in this area. These include parts of Norris and Taku glaciers, as well as Hole-in-the-Wall, West Twin, East Twin, and Wright Glaciers. The Limestone Inlet Research Natural Area is included in the area, and there is some localized karst in the area.

The roadless area includes about 35,562 acres of high-volume, old-growth forest. Of these acres, 6,019 are mapped as high-volume, coarse-canopy old growth.

The Taku-Snettisham Roadless Area lies partially within the Ice Fields and Northern Coast Range Biogeographic Provinces. Approximately 31 percent of the roadless area is within the Ice Fields province and makes up about 7 percent of that province. It is 1 of 9 inventoried roadless areas found in the province that collectively 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 other 69 percent of the Skagway-Juneau Roadless Area is located within the Northern Coast Range province; the roadless area makes up about 43 percent of the province. It is 1 of 6 inventoried roadless areas found in the province that collectively make up about 66 percent of the province. Portions of the Chuck River and Tracy Arm-Fords Terror Wildernesses are within the province and make up about 23 percent of the province.

The Taku-Snettisham Roadless Area lies within two ecological sections; it represents 14 percent of the Boundary Ranges Ecological Section and 3 percent of the Inside Passage Fjordlands Ecological Section. Both these ecological sections are well represented by existing wilderness (33 and 20 percent, respectively) and by other existing non-development LUDs (61 and 30 percent, respectively, including 1 and 2 percent, respectively of LUD II).

The majority of this roadless area (83 percent) is within the Boundary Ranges Icefield Ecological Subsection; this portion of the roadless area represents 14 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 Holkam Bay Complex Ecological Subsection represents 13 percent of the Taku-Snettisham roadless area; this portion of the roadless area represents 17 percent of the entire ecological subsection that is well represented in existing wilderness (32 percent) and other non-development LUDs (28 percent). The Stikine-Taku River Valleys Ecological Subsection represents 4 percent of this roadless area; this portion of the roadless area represents 39 percent of the entire ecological subsection, which is well represented in existing wilderness (43 percent) other non-development LUDs (53 percent).

The Taku-Snettisham Roadless Area was rated 24 out of a possible 28 points under the WARS. As such, its WARS rating is ranked 25th from the highest (along with four other roadless areas) among the 109 Tongass inventoried roadless areas.

There is considerable local and national support for management of the area in an unroaded condition and support for designation of the area for wilderness. Designation would create a very large wilderness that would add to the Tracy Arm-Fords Terror Wilderness. Unless they are separated from the area, the wilderness would border the electric transmission line corridors and other shoreline developments that occur along parts of the area, as well as a potential road corridor that could connect to Canada. It would add numerous glaciers and icefields. Hydroelectric projects located near the edge may not be consistent with wilderness objectives in those localized areas. 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 Taku-Snettisham Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, or 4 is implemented. Approximately 90 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 10 percent. The land in the development LUDs provides an estimated 4,027 acres that are suitable for timber production (10 percent of the suitable land on the Juneau Ranger District). Approximately 313 of the suitable acres are classified as high-volume, coarse-canopy old growth. This roadless area contains 15,911 acres of land identified as mineral activity tracts; approximately 3,013 of the acres are considered to have medium to high potential for expanding mineral exploration or development of locatable minerals. In addition, the roadless area contains an estimated 187,951 acres of undiscovered locatable mineral resources that are considered to have low potential for development. Recreation, research, hydroelectric, timber sales, and special uses programs would continue. The values associated with the natural settings of the roadless area are mostly protected by the Forest Plan. Such values along portions of the roadless area in the vicinity of Stephens Passage where the Forest Plan allows timber management could affect values related to the natural settings in those areas.

Under Alternative 5, a 7,644-acre portion of the roadless area currently allocated to Semi-remote Recreation 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. The potential for other uses and development, including recreation, research, hydroelectric, timber, and some special uses, could be restricted in the Recommended Wilderness area. 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, research, and geologic values, would be provided long-term protection if designated wilderness.

Under Alternative 6, a 261,749-acre portion of the area would be converted to Recommended LUD II and the remainder would be converted to Recommended Wilderness. No timber harvest would be allowed in the roadless area. The potential for other uses and development, including recreation, research, hydroelectric, timber, and some special uses, could be restricted in the Recommended Wilderness area. 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, research, and geologic values, would be provided long-term protection if designated LUD II or wilderness.

Under Alternative 7, a 423,963-acre portion of the roadless area currently allocated to Remote Recreation, Semi-remote Recreation, Old-growth Habitat, Timber Production, Modified Landscape, and Scenic Viewshed LUDs would be converted to Recommended Wilderness LUD. No timber harvest would be allowed in the Recommended Wilderness area. Lands suitable for timber production in the roadless area would be reduced to approximately 724 acres. The potential for other uses and development, including recreation, research, hydroelectric, timber, and some special uses, could be restricted in the Recommended Wilderness area. 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 southern half of the roadless area, including the scenic, research, 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. No timber harvest would be allowed. The potential for other uses and development, including recreation, research, hydroelectric, timber, and some 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 roadless area, including the scenic, research, 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 302 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | 7,644 | 423,963 | 423,963 | 685,712 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | 8,667 | 8,667 | 8,667 | 8,667 | 8,667 | | | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | 208,094 | 208,094 | 208,094 | 208,094 | 208,094 | | 75,588 | |
| Enacted Municipal Watershed | 282 | 282 | 282 | 282 | 282 | | 282 | |
| Old-growth Habitat | 18,409 | 18,409 | 18,409 | 18,409 | 18,409 | | 790 | |
| Semi-remote Recreation | 384,032 | 384,032 | 384,032 | 384,032 | 376,389 | | 168,887 | |
| Recommended LUD II | | | | | | 261,749 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 25,414 | 25,414 | 25,414 | 25,414 | 25,414 | | 16,203 | |
| Modified Landscape | 21,841 | 21,841 | 21,841 | 21,841 | 21,841 | | | |
| Timber Production | 18,973 | 18,973 | 18,973 | 18,973 | 18,973 | | | |
| **TOTAL** | **685,712** | **685,712** | **685,712** | **685,712** | **685,712** | **685,712** | **685,712** | **685,712** |
| Suitable Timber Lands | 4,027 | 4,027 | 4,027 | 4,027 | 4,027 | 0 | 724 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Sullivan (303)

**ACRES (NFS):** 66,143

**BIOGEOGRAPHIC PROVINCE:** Lynn Canal

**ECOLOGICAL SECTION:** St. Elias-Fairweather Mountains, Glacier Bay Fjordlands, and Kootznoowoo Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 26

### I. Overview and Description

**(1) Location and Access:** The area is located on the mainland on the west side of Lynn Canal and extends north from the Endicott River Wilderness boundary to the north boundary of the Tongass National Forest. The area also includes the majority of Sullivan Island. The Chilkat Mountain Range and the Haines State Forest and Resource Management Area are located north of the National Forest boundary. Glacier Bay National Park and Preserve borders the roadless area to the west. The Endicott River Wilderness forms much of the south border of the area, with the remaining portion formed by the boundaries of a former timber sale area. The Sullivan Island portion of the area is bordered to the south by Sullivan Island State Marine Park, which encompasses the southern tip of the island.

The area is located approximately 15 miles south of the city of Haines and about 45 miles northwest across Lynn Canal from the city of Juneau. It is accessible by saltwater and floatplane, but much of this access is weather-dependent. There are no regularly scheduled small plane or ferry stops within this area. An airstrip is located adjacent to the Sullivan Roadless Area on an alluvial fan along Lynn Canal. This airstrip, located within an area that was harvested in the 1960s, is primarily used by hunters and occasionally by miners. There are several old roads in the harvested area in the vicinity of the mouth of the Sullivan River and in the other two areas, which have been harvested. One road was reopened in 2001 to provide access to a communication site. The road was closed and put to bed after this use. Access into the interior is by foot or helicopter.

**(2) History:** Documented historical use of this roadless area has been minimal. Native use of the area was probably limited to hunting or trapping mink, lynx, and other animals, including goat and bear, and gathering berries. Others cultivated garden plots, gathered seaweed and mussels, and hunted seal on the shore of Lynn Canal. Goldschmidt and Haas (1946) indicated that Native people caught shellfish in the area.

Mining began in more recent history and there are active mineral claims in the area. A fox farm was present in the 1930s. Timber harvest occurred in four separate areas along the shoreline in the 1960s. One of these areas forms part of the area's south boundary. The other three areas are located on the low-lying alluvial fans that were formed from glacial rivers feeding into Lynn Canal. These areas have more recently undergone thinning activities.

**(3) Geography and Topography:** The area is generally characterized by rugged, scoured terrain with large, vertical relief. The mountains are often snow-covered and reach elevations up to 4,700 feet. Glaciers have scraped steep, rugged slopes, and formed glacial bowls. Alluvial fans are formed from the glacial rivers that feed into Lynn Canal. These alluvial fan areas were the primary areas harvested in the 1960s. The roadless area contains 30 miles of shoreline on saltwater. The shoreline is flat and accessible at two river mouths; however, overall accessibility is poor. There are 21,455 acres inventoried as rock and 14,890 acres inventoried as ice and snow. Alpine makes up 1,021 acres. This roadless area encompasses two islands, including Sullivan Island, for a total of 3,976 acres.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is located within the Lynn Canal Biogeographic Province. The topography in this province is typically rugged and glaciated. Rain shadows and the dominating influence of the continental climate make this the driest and seasonally warmest province in Southeast Alaska.

Ecological Section/Subsection. The Sullivan Roadless Area is contained mostly within the St. Elias-Fairweather Mountains Ecological Section (M244C) and contains portions within the Glacier Bay Fjordlands Ecological Section (M247A). In addition, the Kootznoowoo Fjordlands Ecological Section (M247D) can be found on the island in the eastern portion of the Sullivan Roadless Area. These areas are represented by three ecological subsections (see table below). The St. Elias-Fairweather Mountains Ecological Subsection represents about two-thirds of the Sullivan Roadless Area. The mountains were formed by tectonic collisions of Pacific arcing terranes and the North American continent, resulting in rugged peaks with elevations reaching 19,000 feet. Except for occasional rock cliffs and nunataks, ice and snow form a continuous sheet over these mountains. Where ice is not present, thin rocky soil supports low alpine vegetation communities. The Chilkat Peninsula Carbonated Ecological Subsection covers the remaining third or the roadless area and branches south of the St. Elias-Fairweather mountains to form a peninsula separating Lynn Canal and Glacier Bay. The vegetation varies from alpine at the higher elevations to spruce-hemlock forests on the mountain slopes and valleys (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| St. Elias-Fairweather Mountains | St. Elias-Fairweather Icefields | 62% |
| Glacier Bay Fjordlands | Chilkat Peninsula Carbonates | 32% |
| Kootznoowoo Fjordlands | Stephens Passage Glaciomarine Terraces | 6% |

**(b) Soils:** Shallow mineral soils (less than 4 inches thick) on steep, V-notched, dissected side slopes are common in the area. Small organic soils (muskegs) occur on infrequent benches and at subalpine elevations. Soils and vegetation occurring on recently deglaciated areas are of concern. These soils are fragile and slight disturbance can eliminate or significantly set back vegetative succession.

**(c) Vegetation:** Vegetation is interspersed with spruce/hemlock rain forest typical of Southeast Alaska and contains frequently scoured, well-drained alluvial deposits supporting willow and alder. There are approximately 1,021 acres of alpine vegetation mapped in this area.

There are approximately 17,135 acres mapped as forest land, of which 12,883 acres (75 percent) are mapped as productive old-growth forest. Of the productive old growth, 5,693 acres (44 percent) are mapped as high-volume, old-growth forest. The productive old growth includes about 1,439 acres of high-volume, coarse-canopy old growth. The area does not include any second growth due to timber harvest in the past.

**(d) Fish Resources:** Fish resources were rated by the Alaska Department of Fish and Game (ADF&G) in its Forest Habitat Integrity Program (1983). These ratings described the value of VCUs for sport fish, commercial fish, and estuaries. None of the VCUs in this area was highly valued for sport or commercial fish. One VCU (VCU 105) received a high estuarine rating. However, only a small portion of this VCU is located in the Sullivan Roadless Area. The remaining majority of VCU 105 is located in the Endicott Wilderness. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not identify any of the VCUs in this area as primary salmon producers. They did, however, identify four of the six VCUs in the area as secondary producers.

**(e) Wildlife Resources:** Mountain goats, moose, brown and black bear, wolves, and some Sitka black-tailed deer are present in this area. Smaller wildlife include mink and lynx.

**(5) Management Direction and Current Uses:** This area was allocated to five Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These 3 LUDs are Modified Landscape, Scenic Viewshed, Minerals, Transportation and Utility System (TUS), and Semi-remote Recreation. Both the TUS and Minerals LUDs are secondary LUDs, which overlay the other land uses.

| LUD | Acres |
|---|---|
| Modified Landscape | 13,463 |
| Scenic Viewshed | 933 |
| Minerals* | 7,128* |
| Transportation and Utility System | NA |
| Semi-remote Recreation | 51,747 |

* Note that acres in the Minerals LUD are included in the Modified Landscape LUD acres.

Approximately 22 percent of the roadless area (not including the LUD overlays) was allocated to LUDs (Modified Landscape and Scenic Viewshed) that allow timber harvest and associated road construction. Land on the mainland directly west of Sullivan Island was allocated to the Modified Landscape LUD, which accounts for approximately 21 percent of the roadless area. The Scenic Viewshed LUD was assigned approximately 1 percent of the roadless area located immediately north of the harvested area that forms part of the area's south boundary. Approximately 11 percent of the roadless area was allocated to the Minerals LUD overlay, located on the shoreline adjacent to Sullivan Island. A proposed state road corridor runs along the east shore of the mainland portion of the area, which was allocated to the Transportation and Utility System LUD overlay.

Most of this area, approximately 78 percent, was allocated to one non-development LUD. This predominant non-development LUD is the Semi-remote Recreation LUD.

The land allocated to the Minerals LUD overlay is known as the Sullivan Tract, which contains deposits of critical minerals. Areas under the Minerals LUD are managed to encourage the prospecting, exploration, development, mining, and processing of minerals in an environmentally sensitive manner. Until a plan of operation is approved, the underlying LUD in this area (Modified Landscape) will continue to apply.

Recreation use in the area is low mainly as a result of poor accessibility. There was no outfitter/guide use in this area in 1999. There are no public recreation facilities in the area. There are no developed trails within this area, but an airstrip is located adjacent to the Sullivan Roadless Area on an alluvial fan along Lynn Canal. This airstrip, located within an area that was harvested in the 1960s, is primarily used by hunters and occasionally by miners. Some thinning has occurred within the previously harvested units.

There is limited subsistence use on Sullivan Island and the adjacent mainland area. The remaining four VCUs that comprise the area are typically not used for subsistence (ADF&G, 1998).

**(6) Appearance (Apparent Naturalness):** Overall, this roadless area has high scenic quality with a mostly natural appearing landscape. Existing modifications to the area include small mining claims and timber harvest activities. Three areas originally harvested in the 1960s are found along the alluvial fans formed by glacial rivers flowing into Lynn Canal. These areas have more recently undergone thinning activities.

The Sullivan Roadless Area is visible from Lynn Canal, which is a major transportation route, as well as from locations in the adjacent Sullivan Island State Marine Park, Endicott River Wilderness, Glacier Bay National Park, and the Chilkat Range. Parts of the area are also visible from the Juneau-Skagway Icefield Roadless Area located east across Lynn Canal.

**(7) Surroundings (External Influences):** The area is part of a larger unroaded mainland land mass. The area extends north from the Endicott River Wilderness and is bordered to the west by Glacier Bay National Park and Preserve. Land uses to the north include the Chilkoot Range and Haines State Forest and Resource Management Area. The area is bordered to the east by Lynn Canal, which serves as a major travel corridor for flights, ferries, ships, and boats. Small planes, ferries, small boats, and cruise ships traveling the Lynn Canal corridor are visible from some locations within the area, but Sullivan Island screens much of the water traffic. Mining and other

activities across Lynn Canal in the Berners Bay area may also be visible from some locations. The state owns land adjacent to the roadless area on Sullivan Island, which is the Sullivan Island State Marine Park.

The area is separated from the Chilkat-West Lynn Canal Roadless Area to the south by a narrow roaded area that was harvested in the 1960s. There is also an airstrip located in this roaded area. This airstrip primarily receives use from hunters and occasionally from miners. Planes using this airstrip are visible from within the Sullivan Roadless Area.

**(8) Attractions and Features of Special Interest:** The opportunity to hunt for both moose and bear is the primary interest in this area. However, similar hunting opportunities exist within the adjacent Endicott River Wilderness. The area contains five inventoried recreation places, which cover 26,432 acres, or 40 percent of the roadless area. There are no improved trails or public recreation cabins in the area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The boundaries of the area have changed since 1989 to include the areas along the shoreline that were logged in the 1960s. These areas were excluded from the 1989 roadless area boundary. There have been no other changes to the boundary.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** Humans and past or present human activity have had limited effects on the natural ecological processes and conditions within this area, with the exception of the areas where timber management activities have occurred on the low-lying alluvial fans along the coastline. There have been a number of mining claims in the area, but the effects of these claims have been primarily localized. The area's overall natural integrity and appearance is, therefore, primarily natural and appropriate for wilderness designation.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a very high opportunity for solitude and an outstanding opportunity for primitive recreation within the area and associated with adjacent roadless land. Present use of the area is low which is undoubtedly related to poor access opportunities. Much of the access is weather-dependent. There are no regularly scheduled small plane or ferry stops within or adjacent to the area. Along the shoreline of Lynn Canal, there is a greater opportunity for seeing or hearing others, primarily small planes, ferries, small boats, or cruise ships, but Sullivan Island screens much of the water traffic. Some thinning has occurred within the old shoreline harvest areas.

Travel within the area can be extremely challenging, 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.

There was no outfitter/guide use in this area in 1999. There are no public recreation facilities in the area. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity, except when on the shoreline. The area is part of a larger unroaded mainland land mass that includes the Endicott River Wilderness, Glacier Bay National Park and Preserve, and the Chilkat-West Lynn Canal 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) | 35,761 | 54% |
| Semi-Primitive Non-Motorized (SPNM) | 25,195 | 38% |
| Semi-Primitive Motorized (SPM) | 4,287 | 6% |
| Roaded Modified (RM) | 898 | 1% |

The area contains 5 inventoried recreation places, which cover 26,432 acres, or 40 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 1 | 27 |
| SPNM | 2 | 22,811 |
| SPM | 2 | 2,695 |
| RM | 4 | 898 |

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

The Sullivan Island State Marine Park is adjacent to this roadless area on Sullivan 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).

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 Sullivan Roadless Area was given a rating of 25 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 26. This rating reflects the very low effects of localized past management activities and the influence of the large roadless land adjacent to the area.

**(4) Ecologic and Geologic Values:** The area is part of a larger unroaded mainland land mass that includes the Endicott River Wilderness, Glacier Bay National Park and Preserve, and the Chilkat-West Lynn Canal Roadless Area. There is limited vegetation in much of the area due to the glaciated and mountainous terrain. Areas of old-growth forest tend to occur along the shorelines and at lower elevations.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not identify any of the VCUs in this area as primary salmon producers or sport fish producers. They did, however, identify four of the seven VCUs in the area as secondary producers.

Sullivan River is the only named stream in this roadless area. No species or abundance information is currently available.

**(b) Wildlife Resources:** Mountain goats, moose, brown and black bear, wolves, and some Sitka black-tailed deer are present in this area. Smaller wildlife include mink and lynx.

**(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, including 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:** The area includes a large swath of karst with low and medium vulnerability that is primarily located in the mountainous region surrounding Sullivan Island State Marine Park and extends to the shoreline south of Sullivan Island. The karst resources are mapped as approximately 10,277 acres, or 16 percent, of the roadless area. All of the karst is mapped as medium or low vulnerability.

There are a number of unnamed glaciers in this area. There are no other known unique geologic features.

**(5) Scientific and Educational Values:** There are no known special features in this area.

**(6) Scenic Values:** Overall, the roadless area has high scenic quality with a mostly natural appearing landscape. Existing modifications to the area include small mining claims and timber harvest activities. Three areas originally harvested in the 1960s are found along the alluvial fans formed by glacial rivers flowing into Lynn Canal. These areas have more recently undergone thinning activities. The visual character type of this roadless area is primarily Coast Range. Much of the area is characterized by moderately complex to complex terrain dominated by angular profiles and sharply defined crests often penetrated by prominent inlets and bays.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Lynn Canal (Alaska Marine Highway and a Tour Ship Route) and the Sullivan Island State Marine Park (State Marine Park).

Approximately 28 percent of this area was inventoried in Variety Class A (possessing landscape diversity that is unique for the character type) with 70 percent in Variety Class B (possessing landscape diversity that is common for the character type). Approximately 1 percent was in Variety Class C (possessing a low degree of landscape diversity).

The Existing Visual Condition (EVC) of 97 percent of this roadless area is EVC I. These areas appear to be untouched by human activity. Two percent was inventoried in EVC III. These are areas in which changes in the landscape are seen by the average person, but they do not attract attention. The natural appearance of the landscape remains dominant.

**(7) Social, Cultural, and Historical Values:** Documented historical use of this roadless area has been minimal. Native use of the area was probably limited to hunting or trapping mink, lynx, and other animals, including goat and bear, and gathering berries. Others cultivated garden plots, gathered seaweed and mussels, and hunted seal on the shore of Lynn Canal. Goldschmidt and Haas (1946) indicated that Alaska Native people caught shellfish in the area.

The area is located on the mainland approximately 15 miles south of the city of Haines and about 45 miles northwest across Lynn Canal from the city of Juneau.

There was no outfitter/guide use in this area in 1999. There are no public recreation facilities in the area.

The Wildlife Analysis Area that includes Sullivan Island and the nearby mainland area accounted for 1 to 3 percent of annual average Haines deer harvest during 1987 to 1994. The area also accounted for less than 1 percent of annual average deer harvest by Juneau residents over the same period. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that subsistence use on Sullivan Island had a moderate to high sensitivity to disturbance. The adjacent mainland VCU was rated as having a relatively low sensitivity to disturbance. The remaining four VCUs that comprise the area were identified as not typically used for subsistence. None of the VCUs in this roadless area was included among the VCUs in the highest, second, or third groups of community use values, nor were any VCUs included 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 area is generally well defined by topographic features. The area is bordered to the east by Lynn Canal, to the south by the Endicott River Wilderness, and to the west by the Glacier Bay National Park and Preserve. The area is, however, bordered to the north by the National Forest boundary, which is a straight line that bisects Mt. Sullivan.

LUD designations adjacent to the south boundary of the area include Wilderness, Scenic Viewshed, and Semi-remote Recreation. The area is bordered to the north and west by non-National Forest System land.

Designating this area wilderness could enlarge the Endicott River Wilderness and expand the total area of wilderness to include areas of wilderness characteristics in Glacier Bay National Park and Preserve. The feasibility of managing this area in a roadless condition is generally high throughout the area. Older development has, however, occurred at three shoreline locations and there are parcels of private land at the mouth of the Sullivan River. Sullivan Island, which is essentially undisturbed, has been identified as a potential wilderness or unroaded area on a number of occasions. Management as wilderness could be in conflict with valid existing mineral rights and associated potential activities.

## 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 but because of the difficulty and cost of access, the potential is considered low. Outfitter and guide services may be increased in the future, especially in relation to big game hunting. There was no outfitter/guide use in the area in 1999.

In 1996, the Alaska Visitors Association (AVA) proposed the following recreation developments for the west coast of Lynn Canal and for Sullivan Island: a backcountry recreation lodge with a 100-person capacity, a leased proprietary camp for 15 persons, a day use recreation area for 150 persons, 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:** The potential remains low for fish enhancement projects within this area.

**(4) Wildlife Resources:** No habitat improvements are planned in the roadless area.

**(5) Timber Resources:** There are approximately 12,883 acres mapped as productive old growth and no acres mapped as second growth due to harvest in the roadless area. Of these acres, 9,223 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), 955 acres, or 1 percent, of this roadless area are estimated to be suitable for timber production. Approximately 569 of the suitable acres are mapped as high-volume old growth; of these acres, 229 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:** The area generally has Priority Two and Three mineral development potential ratings, and there are numerous known current claims. An area along the mainland shoreline across from Sullivan Island was allocated to the Minerals LUD in the 1997 Tongass Land and Resource Management Plan for its deposits of critical minerals.

The roadless area contains 7,129 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 7,128 of these acres is 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. The Minerals LUD is also intended to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when minerals development occurs. In addition, the roadless area contains an estimated 45,569 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 1,730 of these acres are considered to have moderate potential for development.

**(8) Transportation and Utilities:** The 1997 Juneau Access Draft EIS prepared by the U.S. Department of Transportation, Federal Highway Administration, and State of Alaska Department of Transportation and Public Utilities evaluated the possibility of constructing a road from Juneau to Haines/Skagway. A route along the west side of the Lynn Canal was one of the alternatives considered. This project is not currently being pursued as part of

Southeast Alaska's transportation planning efforts. However, it is still part of Southeast Conference as a route of interest in long-term transportation needs for Southeast Alaska.

**(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:** This roadless area contains no designated or inventoried potential Research Natural Areas. There are approximately 10,277 acres, or 16 percent of the roadless area, mapped as karst resources.

**(11) Land Use Authorizations:** Numerous mining claims exist in this area, and AT&T has a special use permit for a communication site near the mouth of the Sullivan River.

**(12) Land Status:** All of the area is National Forest System land. Two areas with encumbrances are located along Lynn Canal within the Sullivan Roadless Area.

## 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 moose or bear hunting.

**(b) Congressional Interest:** Sullivan Island has been identified as a proposed "moratorium" area or proposed as wilderness in legislative initiatives to date. 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 was the proposed Sullivan Island Wilderness, which was identified for its high wildlife and recreation values. Sullivan Island was not included in the Tongass Timber Reform Act wilderness designations. In 2001, HR 2908 identified Sullivan Island as a LUD II area and the remainder of the Sullivan Roadless Area as Proposed Wilderness. The bill also proposed that three rivers, partially located within the area, receive Wild and Scenic River designation.

**(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. The AVA proposed recreation developments for the west coast of Lynn Canal and for Sullivan Island, including a backcountry recreation lodge with a 100-person capacity, a leased proprietary camp for 15 persons, a day use recreation area for 150 persons, and boardwalks, paths and trails.

A number of comments specifically addressed Sullivan Island. These included several requests for protection from logging (some for "permanent" protection as wilderness), citing deer hunting (important to Haines community), scenic quality (ferry and air routes), and recreation uses. The area was identified as a "spectacular old growth area" and a popular anchorage on the ferry route. Other comments addressed the Chilkat Range, which is partially located within the boundaries of the Sullivan Roadless Area. Commenters requested that the range not be developed for timber harvest due to its high scenic value and its importance as wildlife habitat. One timber industry commenter felt that the entire west shore of Lynn Canal, including the portion located within the Sullivan Roadless Area, should be developed for timber harvest and motorized recreation, as well as a north-south road connection.

The South Sullivan River and the Sullivan River area were identified in the September 24, 1997, appeal filed by Lynn Canal Conservation, Inc. (LCC). LCC objected to the fact that the 1997 Record of Decision did not include all of Sullivan River as a "Wild River" under the Wild and Scenic River Act. They noted that the South Sullivan River is popular with hunters and recreationists and produces abundant chum salmon and Dolly Varden. They also noted that the surrounding area is prime habitat for deer, moose, and brown bears.

**(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, particularly because it adjoins the Endicott River Wilderness and Glacier Bay National Park, would conserve valuable remaining undisturbed forested habitats on the mainland.

SEACC recommended that the Sullivan and Chikat-West Lynn roadless areas, which are adjacent to the existing Endicott River Wilderness and to Glacier National Park, should be permanently protected through expansions of the Endicott River Wilderness. They indicated that this combination would create a contiguous wilderness of over 3.1 million acres.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 303 and 304 as adjacent to the existing Endicott River Wilderness and to Glacier Bay National Park. They recommended the two roadless areas for permanent protection as wilderness and as an addition to Endicott River Wilderness to create a contiguous wilderness area of just over 3.1 million acres.

Sullivan Island was recommended for wilderness or other protection by a number individuals.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Sullivan Roadless Area is part of a larger mainland unroaded landmass of approximately 383,799 acres located between the northern National Forest boundary at Point Sullivan to the southern tip of the Chilkat Peninsula at Point Couverden. This larger acreage total includes the Endicott Wilderness and Chilkat-West Lynn Roadless Area (304). In addition, this area is adjacent to 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) | 45 | 50 |
| Sitka (Pop. 8,835) | 120 | 160 |
| Hoonah (Pop. 860) | 50 | 60 |
| Angoon (Pop. 572) | 95 | 100 |

The nearest stop on the Alaska Marine Highway is Haines.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Sullivan Roadless Area is located on the mainland on the west side of Lynn Canal and extends north from the Endicott River Wilderness boundary to the north boundary of the Tongass National Forest. The area also includes the majority of Sullivan Island. The Chilkat Mountain Range and the Haines State Forest and Resource Management Area are located north of the National Forest boundary. Glacier Bay National Park and Preserve borders the roadless area to the west. The Endicott River Wilderness forms much of the south border of the area, with the remaining portion formed by the boundaries of a former timber sale area. The Sullivan Island portion of the area is bordered to the south by Sullivan Island State Marine Park, which encompasses the southern tip of the island. The area is generally characterized by rugged, scoured terrain with large, vertical relief. The mountains are often snow-covered and reach elevations up to 4,700 feet. Glaciers have scraped steep, rugged slopes and formed glacial bowls. Alluvial fans are formed from the glacial rivers that feed into Lynn Canal. The area includes a large swath of karst with low and medium vulnerability that is primarily located in the mountainous region surrounding Sullivan Island State Marine Park and extends to the shoreline south of Sullivan Island.

The area is mostly unmodifed and natural appearing. The natural integrity is rated outstanding and the apparent naturalness rated very high for the area. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

Overall, the area has high scenic quality. Approximately 28 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The area has some karst and much glaciated geology.

The roadless area includes about 5,693 acres of high-volume, old-growth forest. Of these acres, 1,439 are mapped as high-volume, coarse-canopy old growth.

The Sullivan Roadless Area lies within the Lynn Canal Biogeographic Province and makes up about 10 percent of the province. It is 1 of 4 inventoried roadless areas that collectively make up about 77 percent of the province. The Endicott River Wilderness makes up about 15 percent of the Lynn Canal province, and the Berners Bay LUD II area makes up another 6 percent of the province.

The Sullivan Roadless Area lies within three ecological sections; it represents 4 percent of the St. Elias-Fairweather Mountains Ecological Section, 6 percent of the Glacier Bay Fjordlands Ecological Section, and less than 1 percent of the Kootznoowoo Fjordlands Ecological Section. All three Ecological Sections are well represented by existing wilderness (35, 28, and 78 percent, respectively) and by other existing non-development LUDs (63, 50, and 11 percent, respectively). The St. Elias Fairweather Mountains and Kootznoowoo Ecological Sections have 1 percent each of land in LUD II.

The majority of this roadless area (62 percent) is within the St. Elias Fairweather Icefields Ecological Subsection; this portion of the roadless area represents 5 percent of the entire ecological subsection. Approximately 27 percent of this ecological subsection is in existing wilderness, an additional 1 percent is in existing LUD II, and an additional 70 percent is protected by other existing non-development LUDs. The Chilkat Peninsula Carbonates Ecological Subsection represents 32 percent of the Sullivan roadless area; this portion of the roadless area represents 6 percent of the entire ecological subsection, which is well represented in existing wilderness (26 percent) and other non-development LUDs (51 percent). The Stephens Passage Glaciomarine Terraces Ecological Subsection represents 6 percent of this roadless area; this portion of the roadless area represents 1 percent of the entire ecological subsection, which is well represented in existing wilderness (36 percent) with an additional 5 percent in LUD II and 31 percent in other non-development LUDs.

The Sullivan Roadless Area was rated 26 out of a possible 28 points under the 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 wilderness designation for the area. Designation would create a wilderness that would add to a much larger wilderness area including the Endicott River Wilderness and the Glacier Bay National Park Wilderness. 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 Sullivan Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, or 4 is implemented. Approximately 78 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 22 percent. The land in the development LUDs provides an estimated 955 acres that are suitable for timber production (2 percent of the suitable land on the Juneau Ranger District). Approximately 229 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains 7,129 acres of land identified as a mineral activity tract having a high potential for expanding mineral exploration or development of locatable minerals. In addition, the roadless area contains an estimated 45,569 acres of undiscovered locatable mineral resources; 1,730 of the acres are considered to have moderate potential for development. Recreation, minerals, timber sales and special uses programs would continue. The values associated with the natural settings of the area, especially along the coastal areas where timber management activities are allowed, could be affected. The karst, geologic, and most of the scenic values are protected in the roadless area by the Forest Plan.

Under Alternative 5, Sullivan Island would be converted from Semi-remote Recreation to Recommended Wilderness LUD. This would not affect timber sale projects because this are is currently allocated to a non-development LUD. The total area suitable for timber production would not change from Alternative 1. Mineral prospecting and development on Sullivan Island would be allowed up to the time that the area is actually designated as wilderness by Congress. Recreation, mineral activities, timber sales, and special uses would continue in the remainder of the area. The values associated with the natural settings of the Sullivan Island portion of the roadless area would be provided long-term protection if designated wilderness.

Under Alternative 6, Sullivan Island would be converted to Recommended LUD II and the remainder of the roadless area would be converted to Recommended Wilderness LUD. No timber harvest would be allowed in the roadless area. The potential for other uses and development, including recreation, minerals, and some special uses, could be restricted in the Recommended Wilderness area. 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 geologic values, would be provided long-term protection if designated LUD II or wilderness.

Under Alternative 7 or 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the potential for other uses and development, including recreation, minerals and some 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 roadless area, including the 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 303 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | 3,976 | 62,167 | 66,143 | 66,143 |
| 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 | 51,747 | 51,747 | 51,747 | 51,747 | 47,771 | | | |
| Recommended LUD II | | | | | | 3,976 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 933 | 933 | 933 | 933 | 933 | | | |
| Modified Landscape | 13,463 | 13,463 | 13,463 | 13,463 | 13,463 | | | |
| Timber Production | | | | | | | | |
| **TOTAL** | **66,143** | **66,143** | **66,143** | **66,143** | **66,143** | **66,143** | **66,143** | **66,143** |
| Suitable Timber Lands | 955 | 955 | 955 | 955 | 955 | 0 | 0 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Chilkat-West Lynn Canal (304)

**ACRES (NFS):** 198,109

**BIOGEOGRAPHIC PROVINCE**: Lynn Canal

**ECOLOGICAL SECTION:** Glacier Bay Fjordlands, and Kootznoowoo Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 25

### I. Overview and Description

**(1) Location and Access:** The Chilkat-West Lynn Canal Roadless Area, located on the mainland, is bordered on the east by Lynn Canal and St. James Bay State Marine Park. Glacier Bay National Park and Preserve, Excursion Inlet, Icy Strait, and an area of non-National Forest System lands, border the area to the west. Endicott River Wilderness forms the north border of the area, along with a small, developed area where road construction and timber harvest has occurred. The Sullivan Roadless Area is located north of this small, developed area and the Endicott River Wilderness. The Chilkat-West Roadless Area is bordered to the south by an area of road construction and timber harvest, an area of non-National Forest System lands, and saltwater.

The communities closest to the roadless area are Gustavus (approximately 10 miles west), Juneau (approximately 25 miles directly east of the southern tip of the area), Hoonah (approximately 10 miles across Icy Strait), and Haines (35 miles directly north of the northern portion of the area).

The closest regularly scheduled airplane or Alaska Marine Highway ferry service stops are Juneau and Hoonah. Access to the area is possible via saltwater, as well as float plane. There are no places suitable for landing wheeled airplanes. There are a number of roads leading close to the area. These include the forest roads associated with the timber management areas that border the roadless area in the southwest, as well as the roads located near Excursion Inlet on the west. Access into the interior is by foot or helicopter.

**(2) History:** The southern end of the Chilkat Peninsula has been suitable for human occupation for at least the last 11,000 years, and documented prehistoric sites have been recorded there. Tlingit tribes were the primary inhabitants of the area. Goldschmidt and Haas (1946) identified a number of native facilities and uses in the immediate vicinity of this roadless area. These included cemeteries, villages, and cabin/smokehouses, as well as commercial fish traps.

More recent history includes mining activities, significant black bear and mountain goat hunting in the southern Chilkat area, and three timber sales: the Home Shore Sale (1976), the Couverden Timber Sale (1980s), and the Home Shore II Timber Sale (1991). These timber sale areas are outside but adjacent to the Roadless Area.

**(3) Geography and Topography:** The Chilkat-West Lynn Canal Roadless Area is characterized by rugged topography. The Chilkat Mountain Range runs the entire north-south length of the roadless area; its lateral, glacially formed valleys are typically U-shaped. Highland elevations range from 2,000 to 4,500 feet with alpine covering 36,828 acres, rock covering 27,397 acres, and ice and snowfields covering 9,840 acres. The entire area has been extensively glaciated and contains many glacial features, including glacial cirques and terns. The Endicott terraced alluvial plain is significant topographically in the northern portion of this area. The side walls of many of the valleys have been scoured by ancient ice sheets, and bedrock outcroppings are common throughout the area.

The southern coastline, along Excursion Inlet, is comprised of moderate to steeply sloping forest terrain supporting relatively small drainage systems. The area's southern slopes are, for the most part, gently rolling and uniformly forested, particularly in foreground situations. Rugged, snow-clad peaks form an impressive backdrop panorama. There are 63 miles of shoreline on saltwater. This area contains 20 islands and islets (5 of these are greater than 10 acres) totaling 518 acres. Freshwater lakes comprise only 207 acres in the area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. This area is located within the Lynn Canal Biogeographic Province. The topography in this province is typically rugged and glaciated. Western and mountain hemlock, and Sitka spruce plant associations are common. Alpine tundra and extensive rock/lichen communities dominate much of the land over 2,000 feet. Rain shadows and the dominating influence of the continental climate make this the driest and seasonally warmest province in Southeast Alaska.

Ecological Section/Subsection. The Chilkat-West Lynn Canal Roadless Area is contained almost entirely within the Glacier Bay Fjordlands Ecological Section (M247A) and a very small area is contained within the Kootznoowoo Fjordlands Ecological Section (M247D). These areas are represented by two ecological subsections (see table below). The Chilkat Peninsula Carbonated Ecological Subsection, covering the vast majority of the roadless area, branches south of the St. Elias-Fairweather mountains to form a peninsula separating Lynn Canal and Glacier Bay. A matrix of sedimentary sandstone with carbonate bands comprises the lithology, with epikarst present as well. Due to the high elevations, alpine snowfields and meadows dominate the vegetation community. Lower elevations support subalpine shrublands and hemlock-spruce forests. (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Glacier Bay Fjordlands | Chilkat Peninsula Carbonates | 100% |
| Kootznoowoo Fjordlands | Stephens Passage Glaciomarine Terraces | <1% |

**(b) Soils:** Glacial till from local glacial origin is the predominant soil parent material and has been deposited on valley side walls to approximately 1,500 feet in elevation. The glacial till thins as it reaches higher elevations. Deeper, well-drained, forested soils occur along the lower slopes and valley bottoms. The valley bottoms are alluvial with outwash materials of stratified sands, gravels, and silts of glacial or recent stream origin. Some landslides have occurred as a result of natural erosion processes. Snow avalanche paths are present, reaching valley bottoms in many cases. Timbered, organic, muskeg soils are found throughout the area.

**(c) Vegetation:** Timber stands within this area are composed primarily of western hemlock and Sitka spruce. The forest understory varies in density and composition depending on the percent of canopy closure, which, in turn, is affected by soil type, incidence of blowdown, and soil drainage. Understory vegetation of blueberry, huckleberry, rusty menziesia, and devil's club is typical. Muskeg, mapped at 585 acres in this area, is dominated by sphagnum mosses, sedges, rushes and ericaceous shrubs. Muskeg is interspersed within other types in units too small to map; therefore, the acreage for muskeg may be substantially understated. Grass-sedge meadows are located at lower elevations along the coast. Low mat-forming vegetation adapted to snowpack and wind abrasion dominates alpine areas; heaths, grasses and low plants, such as deer cabbage, are typical. There are 36,832 acres mapped as alpine in this area.

There are approximately 82,300 acres mapped as forest land, of which 47,442 acres or 58 percent are mapped as productive old-growth forest. Of the productive old growth, 23,789 acres (50 percent) are mapped as high-volume old-growth forest. The productive old growth includes about 4,607 acres of high-volume, coarse-canopy old growth. There are also 41 acres of second growth due to beach harvest.

**(d) Fish Resources:** Alaska Department of Fish and Game (ADF&G, 1983) rated fish resources in its Forest Habitat Integrity Program. These ratings describe the value of VCUs for sport fish, commercial fish, and estuaries. None of the VCUs in this area was rated as highly valued for sport fish. Seven VCUs in the area were rated as high value for commercial fish. In some cases, only small portions of these VCUs are included within the roadless area boundaries.

VCUs located partially within the area that were rated as highly valued estuaries included Boat Harbor (109) and St. James Bay (111). It should, however, be noted that in both cases the estuary portion of these VCUs is located outside the boundary of the Chilkat-West Lynn Canal Roadless Area.

The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) did not identify any of the VCUs in the area as primary salmon producers. One of the VCUs in the area (VCU 123) was listed as a non-producer.

Many streams in this area support runs of Dolly Varden, steelhead, and cutthroat trout. Humphy Creek, Teardrop Creek, Mirror Creek, and the Sullivan River are some of the named streams in this area.

**(e) Wildlife Resources:** This roadless area commonly supports mountain goats, black and brown bear, Sitka black-tailed deer, bald eagles, and wolves. Moose are also present.

**(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, Timber Production, Transportation and Utility System (TUS), Semi-remote Recreation, and Old-growth Habitat. The TUS LUD is a secondary LUD, which overlays the other land uses.

| LUD | Acres |
|---|---|
| Scenic Viewshed | 31,003 |
| Timber Production | 15,221 |
| Transportation and Utility System | NA |
| Semi-remote Recreation | 138,818 |
| Old-growth Habitat | 13,066 |

Approximately 23 percent of this roadless area (not including the LUD overlay) was allocated to a development LUD (Scenic Viewshed and Timber Production). Lands along the shoreline north and south of St. James Bay State Marine Park were allocated to the Scenic Viewshed LUD. The Scenic Viewshed LUD accounts for approximately 16 percent of the roadless area. Approximately 7 percent of the roadless area, along the southern boundary, was allocated to the Timber Production LUD. A proposed State road corridor along the west shore of the Lynn Canal was assigned to the Transportation and Utility System LUD overlay.

Most of the roadless area, approximately 77 percent, was allocated to one of two non-development LUDs (Semi-remote Recreation, Old-growth Habitat). Most of the land in the Chilkat-West Lynn Canal Roadless Area, approximately 70 percent, was allocated to the Semi-remote Recreation LUD. The Old-growth Habitat LUD was assigned approximately 7 percent of the roadless area.

Current recreation uses within this roadless area are, for the most part, dispersed. Hunting (moose, mountain goat, and black bear), fishing (fin and shellfish), and pleasure boating adjacent to the roadless area are the most popular pursuits. The highland core of the southern Chilkat Peninsula remains a remote and challenging environment for the backpacker, mountaineer, and hunter. There is one Special Use Permit recreation cabin on Teardrop Creek. There are no trails within the area. The National Guard, in recent years, has conducted maneuvers in this area. Subsistence use occurs in the area.

Timber sale evaluations are being initiated for the Couverden Project (25 MMBF), located in the western side of the southern tip of the peninsula. The majority of the area being evaluated is developed, but it slightly extends into the roadless area. The Couverden FEIS and ROD are scheduled for 2003.

**(6) Appearance (Apparent Naturalness):** Overall, this roadless area has high scenic quality with a mostly natural appearing landscape that provides a scenic backdrop for those traveling Lynn Canal, as well as Chatham and Icy Straits aboard cruise ships and State ferries. Visual Priority Routes and Use Areas within or adjacent to the area include Lynn Canal and Icy Strait, which are part of the Alaska Marine Highway and tour ship routes. The Chilkat-West Lynn Canal Roadless Area appears largely natural and unmodified from the Forest Service designated visual priority routes and use areas.

The area's apparent naturalness is, however, affected by developed areas that border parts of the area and appear to be part of the roadless area when viewed from some locations, especially Icy Strait, which borders the area to the south. Adjacent developed areas include areas where road building and timber harvest have occurred along the shoreline of the peninsula.

**(7) Surroundings (External Influences):** The area is part of a larger unroaded mainland land mass. The area extends south from the Endicott River Wilderness and is partially bordered to the west by Glacier Bay National Park and Preserve. The area is bordered to the east by Lynn Canal, which serves as a major travel corridor for flights, ferries, ships, and boats. Small planes, ferries, small boats, and cruise ships traveling the Lynn Canal corridor are visible from some locations within the area. Mining and other activities across Lynn Canal in the Berners Bay area may also be visible from some locations. In addition, air and water traffic to both Gustavus (Glacier Bay National Park) and Hoonah use Icy Strait. There are also popular commercial fishing grounds located adjacent to the south portion of the area. These activities are visible from some locations within the roadless area.

The area is separated from the Sullivan Roadless Area to the north by a narrow roaded area that was harvested in the 1960s.

There is also an unmaintained airstrip located on a section of system road in this roaded area. This airstrip is currently overgrown and unusable. Planes using this airstrip would be visible from within the Chilkat-West Lynn Canal Roadless Area.

Additional timber harvest is planned in the Couverden Timber Sale area, which borders the roadless area to the south. A final decision (Environmental Impact Statement and Record of Decision) on timber harvest in this area is expected to be made in 2003. Additional development in this area may affect a portion of the Chilkat-West Lynn Canal Roadless Area in terms of noise and visual impacts, and extension into the roadless area within the development LUDs.

**(8) Attractions and Features of Special Interest:** The complexities of alpine tundra, scrub and old-growth forest, numerous small lakes, snowfields, steeply walled glacial valleys, and waterfalls offer a variety of attractions and features of interest. In reasonable proximity to Juneau, recreation and hunting opportunities serve to draw people to the southern portion of this roadless area along the coast and where roads occur. The area contains 12 inventoried recreation places, which cover 27,194 acres, or 14 percent of the roadless area. There are a number of anchorages within or adjacent to the area, including Howard Bay, St. James Bay, Couverden Island, Ansley Island, and William Henry Bay.

An equally important asset of the southern Chilkat Peninsula, from a more passive standpoint, relates to the Peninsula's importance as a scenic backdrop for those traveling Lynn Canal (Juneau/Haines/Skagway) and Chatham and Icy Straits aboard cruise ships and State ferries.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** There are three differences between the 1989 and 2003 roadless area boundaries. First, the southern tip of the area is no longer National Forest System lands and is, therefore, excluded from the roadless area. This excluded area includes Couverden Island and Swanson Harbor. Second, harvest activities have occurred in the Couverden Timber Sale area since 1989, thereby slightly altering the south boundary of the Chilkat-West Lynn Canal Roadless Area. Third, the narrow undeveloped area between the Couverden Timber Sale's south boundary and the shoreline has been excluded from the 2003 area. Additionally, several smaller areas in the Couverden area have been excluded along the boundary 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 roadless area is largely unmodified and, therefore, maintains its natural integrity and apparent naturalness very well. Timber harvest has occurred in a small area north of St. James Bay State Marine Park. Long-term ecological processes are generally intact and operating. The area's overall appearance is, therefore, generally appropriate for wilderness designation.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a very high opportunity for solitude and outstanding opportunities for primitive recreation within the interior of the area, especially when the large roadless areas adjacent to the area are factored in. The highland core of the southern Chilkat Peninsula remains a remote and challenging environment for the backpacker, mountaineer, and hunter. The potential for solitude is affected along the shore of the area by the substantial boating activities and flight corridors. There are no public recreation facilities within this area and recreation remains primarily dispersed, with the majority of use occurring along the coastline. Hunting (moose and black bear), fishing (fin and shellfish), and pleasure boating adjacent to the roadless area are the most popular pursuits. All-weather anchorages and interesting coves and beaches within the Point Couverden/St. James Bay area offer excellent opportunities for beachcombing, camping, and picnicking. Access is from private boats or private or chartered aircraft. Outfitter/guide use was reported in two locations in 1999. Seven groups, with a total of 27 clients, fished at Mirror Creek on the east side of the peninsula. Three groups, with a total of 10 clients, fished at Howard Bay.

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) | 95,650 | 48% |
| Semi-Primitive Non-Motorized (SPNM) | 87,744 | 44% |
| Semi-Primitive Motorized (SPM) | 8,886 | 4% |
| Roaded Natural (RN) | 206 | 0% |
| Roaded Modified (RM) | 5,562 | 3% |

The area contains 12 inventoried recreation places, which cover 27,194 acres, or 14 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPNM | 2 | 14,484 |
| SPM | 5 | 8,626 |
| RN | 2 | 47 |
| RM | 9 | 4,038 |

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

The St. James Bay Marine State Park is adjacent to the northwest part 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 Chilkat-West Lynn Canal Roadless Area was given a rating of 23 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 25. This rating reflects the ability of the large roadless area along with other adjacent roadless lands to absorb the localized developed areas along some of the edges.

**(4) Ecologic and Geologic Values:** The area is part of a larger mainland roadless area that includes the Endicott River Wilderness, Glacier Bay National Park and Preserve, and the Sullivan Roadless Area.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment did not identify any of the VCUs in the area as primary salmon producers or sport fish producers. All the VCUs are identified as secondary salmon producers (ADF&G, 1998).

Many streams in this area support runs of Dolly Varden, steelhead, and cutthroat trout. Humphy Creek, Teardrop Creek, Mirror Creek, and the Sullivan River are some of the named streams in this area.

**(b) Wildlife Resources:** This roadless area commonly supports mountain goats, black and brown bear, Sitka black-tailed deer, bald eagles, and wolves. Moose are also present. Marine mammal rookeries are found throughout the area along the coastline.

Based on data compiled from 1985 to 1994, three VCUs partially located in the area (VCUs 111, 117, and 120) were rated in the top 25 percent of black bear harvest on the Tongass National Forest. One VCU (VCU 119) was rated in the second 25 percent, with another three (VCUs 107, 110, and 115) rated in the third 25 percent (ADF&G, 1998). A total of 184 black bears was harvested in this roadless area between 1985 and 1994.

**(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. Marine mammal rookeries are found throughout the area along the coastline. 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 numerous areas of low to medium vulnerability karst in this roadless area. Areas of low vulnerability karst can be found near Lance Point and north and south of Boat Harbor. An area of mostly low vulnerability karst is located around William Henry Bay. Mostly medium vulnerability areas are found in the mountainous regions in the middle of the roadless area, from Yang Webster Peak to Nun Mountain. A large, narrow swath of medium and low vulnerability karst extends from the Glacier Bay National Park boundary to Teardrop Lake, and a small area of karst is located at the north end of Howard Bay. The karst resources are mapped at 19,402 acres, or approximatley 10 percent, of the roadless area. All of the karst is mapped as medium or low vulnerability. The entire area has been extensively glaciated and contains many glacial features, including glacial cirques and terns.

**(5) Scientific and Educational Values:** There are no known special features in this area.

**(6) Scenic Values:** Overall, this roadless area has high scenic quality with a mostly natural appearing landscape. The area's southern slopes are, for the most part, gently rolling and uniformly forested with rugged, snow-clad peaks forming an impressive backdrop panorama for those traveling Lynn Canal, and Chatham and Icy Straits aboard cruise ships and State ferries. The area's apparent naturalness is, however, affected by developed areas that border the area and appear to be part of the roadless area when viewed from some locations, especially Icy Strait, which borders the area to the south. Adjacent developed areas include areas where road building and timber harvest have occurred along the shoreline of the peninsula.

A number of Visual Priority Routes and Use Areas identified by the Forest Plan are within or adjacent to the area. Visual Priority Routes include Lynn Canal and Icy Strait (Alaska Marine Highway and Tour Ship Routes), Howard Point, St. James Bay, William Henry Bay, West Lynn Canal, Lynn Canal, Icy Strait, and Excursion Inlet (Small Boat Routes). Use Areas include St. James Bay State Marine Park; Couverden Island, Howard Bay and Point, and Lynn Canal (Saltwater Use Areas); St. James Bay, Couverden Island and Mainland No Use Ledge to Point Howard, (Dispersed Recreation Areas); Excursion Inlet (Community); and St. James Bay, Couverden Island, Ansley Island, and William Henry Bay (Boat Anchorages).

Approximately 11 percent of this roadless area was inventoried in Variety Class A (possessing landscape diversity that is unique for this character type), 77 percent in Variety Class B (possessing landscape diversity that is common for the character type), and 12 percent in Variety Class C (possessing a low degree of landscape diversity).

The vast majority of the roadless area (approximately 95 percent) is in Existing Visual Condition (EVC) I and appears untouched by human activity. Three percent of the acreage is in EVC III where changes in the landscape are noticed by the average person, but do not attract attention, and the natural appearance of the landscape still remains dominant. Approximately 1 percent of this roadless area is in EVC IV where changes in the landscape are easily noticed by the average person and may attract some attention. These changes appear as disturbances but resemble natural patterns. Approximately 1 percent of the area is in EVC V, where changes in the landscape are in glaring contrast to the natural condition and appear to be drastic disturbances.

**(7) Social, Cultural, and Historical Values:** The southern end of the Chilkat Peninsula has been suitable for human occupation for at least the last 11,000 years, and documented prehistoric sites have been recorded there. Tlingit tribes were the primary inhabitants of the area. More recent history includes mining activities, significant black bear hunting in the southern Chilkat area, and three timber sales southwest of the roadless area.

The communities closest to the roadless area are Gustavus (approximately 10 miles west), Juneau (approximately 25 miles directly east of the southern tip of the area), Hoonah (approximately 10 miles across Icy Strait), and Haines (35 miles directly north of the northern portion of the area).

There are no public recreation facilities within this area and recreation remains primarily dispersed, with the majority of use occurring along the coastline. Access is from private boats or private or chartered aircraft. Hunting (moose, mountain goat, and black bear), fishing (fin and shellfish), and pleasure boating adjacent to the roadless area are the most popular pursuits. The highland core of the southern Chilkat Peninsula remains a remote and challenging environment for the backpacker, mountaineer, and hunter. All-weather anchorages and interesting coves and beaches within the Point Couverden/St. James Bay area offer excellent opportunities for beachcombing, camping, and picnicking. Outfitter/guide use was reported in two locations in 1999. Seven groups, with a total of 27 clients, fished at Mirror Creek on the east side of the peninsula. Three groups, with a total of 10 clients, fished at Howard Bay.

The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that subsistence use in the VCU that includes St. James Bay (VCU 111) had a high sensitivity to disturbance. It should, however, be noted that the lands along the shoreline of the bay are not part of the Chilkat-West Lynn Canal Roadless Area. Two of the VCUs in this area (VCU 120, Porpoise Island, and VCU 121, both along Chatham Strait) were included among the highest value community use areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is generally well defined by topographic features. The area is bordered by adjacent bodies of water, the Glacier Bay National Park and Preserve, and the Endicott River Wilderness. There are some State-owned or private parcels of land in St. James Bay and at the north end of Excursion Inlet.

LUD designations adjacent to the north boundary of the area include Wilderness, Scenic Viewshed, and Semi-remote Recreation. The area is bordered to the west by non-National Forest System lands (Glacier Bay National Park and Monument).

Designating this area wilderness would extend the Endicott River Wilderness and the boundaries of the larger wilderness area that includes Glacier Bay National Park and Preserve, as well as the Endicott River Wilderness. The feasibility of managing this area as wilderness or in a roadless condition is generally high throughout the area. The drainages in the southern portion of the roadless area that includes developments associated with the Couverden area could be excluded to improve overall manageability.

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

**(1) Recreation, Including Tourism Potential:** There is great potential to provide a variety of recreation opportunities within this roadless area. High wildlife values coincide with high-quality dispersed recreation areas. The rugged interior of the Chilkat Peninsula offers the hiker, backpacker, and mountaineer diverse and imposing scenery, a high degree of challenge, and unlimited opportunities to experience solitude. All-weather anchorages and interesting coves and beaches offer excellent opportunities for beachcombing, camping, and picnicking. The presence of heavy boat and air traffic does, however, limit the potential for solitude along the shoreline.

In 1996, the Alaska Visitors Association (AVA) proposed the following recreation developments in this roadless area: a leased proprietary camp with a 15-person capacity in Excursion Inlet; a backcountry recreation lodge for 50 persons/day, leased proprietary camps for 15 persons per site, and boardwalks, trails and paths for the Endicott River.

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

**(3) Fish Resources:** A fish habitat improvement project was completed on Humphy Creek. No other fish habitat enhancement projects have been identified.

**(4) Wildlife Resources:** No wildlife habitat enhancement projects have been identified for this area.

**(5) Timber Resources:** There are approximately 47,442 acres mapped as productive old growth in the roadless area. In addition, 41 acres of second growth have resulted from beach logging activities. Of these acres, 32,898 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), 5,981 acres (3 percent) of this roadless area are estimated to be suitable for timber production. Approximately 2,924 of the suitable acres are mapped as high-volume old growth; of these acres, 535 are mapped as high-volume, coarse-canopy old growth.

Timber sale evaluations are being initiated for the Couverden Project (25 MMBF), located on the western side of the southern tip of the peninsula. The majority of the area being evaluated is developed, but it slightly extends into the roadless area. The Couverden FEIS and ROD are 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:** Mineral activity and prospecting have been concentrated along the coast and more accessible areas inland. Locations of copper and silver have been made on small, weakly mineralized areas on the west side of Point Howard. Generally, the area has low mineral potential. As a result, it has not been heavily prospected, but there are numerous known current claims. The roadless area contains approximately 75,809 acres of undiscovered locatable mineral resources that are considered to have low or very low potential for development. (Brew et al., 1990; USDA Forest Service, 1991).

**(8) Transportation and Utilities:** The 1997 Juneau Access Draft EIS prepared by the U.S. Department of Transportation, Federal Highway Administration, and State of Alaska Department of Transportation and Public Utilities evaluated the possibility of constructing a road from Juneau to Haines/Skagway. A route along the west side of the Lynn Canal was one of the alternatives considered. This project is not currently being pursued as part of Southeast Alaska's transportation planning efforts; however, it remains in the Transportation and Utility System LUD.

**(9) Water Availability and Use:** No developed recreation 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 areas of scientific interest in this area.

**(11) Land Use Authorizations:** There is a Special Use Permit for a recreation cabin on Teardrop Creek. The Forest Service has a radio repeater on William Henry Peak. The Federal Aviation Authority has a Special Use Permit for a radio site near Point Howard. This site is known as Lynn's Interchange. Alascom-AT&T has a special use permit for a radio facility near William Henry Bay.

**(12) Land Status:** All lands in the roadless area are a part of the National Forest System. A few areas of encumbered land exist within this roadless area.

## 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 recreation, hunting, and some mining activities. Commercial fisheries occur on saltwater south and west 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 Chilkat-West Lynn Canal Roadless Area. In 2001, HR 2908 identified the entire area as Proposed Wilderness. The bill also proposed that the river flowing into St. James Bay receive Wild and Scenic River designation.

**(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. The AVA proposed the following recreation developments in this roadless area: a leased proprietary camp with a 15-person capacity in Excursion Inlet; a backcountry recreation lodge for 50 persons/day, leased proprietary camps for 15 persons per site, and boardwalks, trails and paths for the Endicott River.

Commenters specifically requested that Porpoise Island, located south of the peninsula, not be logged because logging activities would have drastic effects on this small island. The Friends of Glacier Bay organization requested that Management Areas (MAs) C18 and C19 be managed in a "natural setting" in recognition of the potential effect that development could have on the adjacent Glacier National Park and Preserve. A number of commenters also requested protection for Point Couverden, which has since been conveyed to the state.

Other comments addressed the Chilkat Range, which is partially located within the boundaries of the Chilkat-West Lynn Canal Roadless Area. Commenters requested that the range not be developed for timber harvest due to its high scenic value and its importance as wildlife habitat. A number of comments addressing the West Lynn Canal Area identified it as a great tourist and scenic corridor and requested the land be preserved or managed for semi-primitive recreation. Timber industry representatives requested that the entire west shore of Lynn Canal, including the portion located within the Sullivan Roadless Area, be developed for timber harvest and motorized recreation, as well as a north-south road connection.

Lower Endicott River, St. James Bay area, and Point Couverden/Homeshore were identified in the September 24, 1997 appeal filed by Lynn Canal Conservation, Inc. (LCC). Point Couverden/Homeshore was also identified in the appeal filed by the Friends of Glacier Bay. LCC requested that Lower Endicott River be classified as a Wild and Scenic River because of its high value fisheries and wildlife habitat and its tourism and scenic values. They also objected to the potential effects of logging in the Lynn Canal corridor. In addition, LCC requested that the St. James Bay and Point Couverden/Homeshore areas be protected from logging and mineral development. The Friends of Glacier Bay requested that Point Couverden/Homeshore be managed under a natural setting 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:** 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, particularly because it adjoins the Endicott River Wilderness and Glacier Bay National Park, would conserve valuable remaining undisturbed forested habitats on the mainland.

SEACC recommended that the Sullivan and Chikat-West Lynn roadless areas, which are adjacent to the existing Endicott River Wilderness and to Glacier Bay National Park, should be permanently protected through expansions of the Endicott River Wilderness. They indicated that this combination would create a contiguous wilderness of over 3.1 million acres.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 303 and 304 as adjacent to the existing Endicott River Wilderness and to Glacier Bay National Park. They recommended the two roadless areas for permanent protection as wilderness and as an addition to Endicott River Wilderness to create a contiguous wilderness area of just over 3.1 million acres.

The Gustavus Community Association recommended increased protection for Roadless Area 304 because the current Forest Plan fails to adequately protect areas of particular concern to the community of Gustavus, such as Point Couverden.

A number of individual commenters identified Point Couverden, Homeshore, and St. James Bay as areas in need of protection and some recommended the entire roadless area.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Chilkat-West Lynn Canal Roadless Area is part of a larger mainland roadless area located between the northern National Forest boundary at Point Sullivan and the southern tip of the Chilkat Peninsula at Point Couverden. This larger area includes the Endicott Wilderness and the Sullivan Roadless Area (303). In addition, this area is adjacent to 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 | 30 |
| Sitka (Pop. 8,835) | 80 | 125 |
| Hoonah (Pop. 860) | 10 | 15 |
| Angoon (Pop. 572) | 50 | 55 |

The Alaska Marine Highway provides service to Juneau, Haines, and Hoonah.

**(4) Relative Contribution to the National Wilderness Preservation System.** The Chilkat-West Lynn Canal Roadless Area is located on the mainland and bordered on the east by Lynn Canal and St. James Bay State Marine Park. Glacier Bay National Park and Preserve, Excursion Inlet, Icy Strait, and an area of non-National Forest System lands border the area to the west. Endicott River Wilderness forms the north border of the area along with a small developed area. The roadless area is bordered to the south by a developed area, an area of non-National Forest System lands, and saltwater. The area is characterized by rugged topography. The Chilkat Mountain Range runs the entire north-south length of the roadless area; its lateral, glacially formed valleys, are typically U-shaped. Highland elevations range from 2,000 to 4,500 feet. The entire area has been extensively glaciated and contains many glacial features, including glacial cirques and terns. The Endicott terraced alluvial plain is significant topographically in the northern portion of this area. The side walls of many of the valleys have been scoured by ancient ice sheets, and bedrock outcroppings are common throughout the area. The southern coastline, along Excursion Inlet, is comprised of moderate to steeply sloping forest terrain supporting relatively small drainage systems. The area's southern slopes are, for the most part, gently rolling and uniformly forested, particularly in foreground situations.

The area is mostly unmodified and in a natural condition. The natural integrity is very high and the apparent naturalness is very high. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

Approximately 11 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The rugged glaciated features of the area are an important geologic feature, along with fairly extensive karst. The area also has important cultural values.

The roadless area includes about 23,789 acres of high-volume, old-growth forest. Of these acres, 4,607 are mapped as high-volume, coarse-canopy old growth.

The Chilkat-West Lynn Canal Roadless Area lies within the Lynn Canal Biogeographic Province and makes up about 30 percent of the province. It is one of four inventoried roadless areas that collectively make up about 77 percent of the province. The Endicott River Wilderness makes up about 15 percent of the Lynn Canal province, and the Berners Bay LUD II area makes up another 6 percent of the province.

The Chilkat-West Lynn Canal Roadless Area lies within two ecological sections; it represents 57 percent of the Glacier Bay Fjordlands Ecological Section and 0.1 percent of the Kootznoowoo Fjordlands Ecological Section. Both Ecological Sections are well represented by existing wilderness (28 and 78 percent, respectively) and by other existing non-development LUDs (50 and 11 percent respectively). The Kootznoowoo Ecological Section has 1 percent of land in LUD II.

Almost all of this roadless area (100 percent) is within the Chilkat Peninsula Carbonates Ecological Subsection; this portion of the roadless area represents 59 percent of the entire ecological subsection, which is well represented by existing wilderness and other non-development LUDs (26 and 51 percent, respectively). The Stephens Passage Glaciomarine Terraces Ecological Subsection represents less than 1 percent of the Chilkat-West Lynn Canal roadless area. This portion of the roadless area represents 0.1 percent of the entire ecological subsection, which is well represented by existing wilderness and other non-development LUDs (36 and 31 percent, respectively) with an additional 5 percent in LUD II.

The Chilkat-West Lynn Canal 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 12$^{th}$ from the highest (along with 12 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is considerable local and national support for wilderness designation for the area. Designation would create a wilderness that would add to a much larger wilderness, including the Endicott River Wilderness and the Glacier Bay National Park Wilderness. 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 Chilkat-West Lynn Canal Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 is implemented. Approximately 77 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 23 percent. The land in the development LUDs provides an estimated 5,981 acres that are suitable for timber production (15 percent of the suitable land on the Juneau Ranger District). Approximately 535 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains approximately 75,809 acres of undiscovered locatable mineral resources that are considered to have low or very low potential for development. Recreation, minerals, timber sales, and special uses programs would continue. The values associated with the natural settings of the roadless area could be affected by timber management related activities in the southern part of the area and in the vicinity of St. James Bay. The cultural, karst and most scenic values are protected by the Forest Plan.

Under Alternative 6 or 7, almost the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed in the roadless area. The potential for other uses and development, including recreation, minerals, and some special uses, could be restricted in the Recommended Wilderness area. 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 cultural values, would be provided long-term protection if designated wilderness.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the potential for other uses and development, including recreation, minerals, and some 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 roadless area, including the scenic, karst, 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 304 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | 197,942 | 197,942 | 198,109 |
| 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 | 13,066 | 13,066 | 13,066 | 13,066 | 13,066 | | | |
| Semi-remote Recreation | 138,818 | 138,818 | 138,818 | 138,818 | 138,818 | | 167 | |
| Recommended LUD II | | | | | | 167 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 31,003 | 31,003 | 31,003 | 31,003 | 31,003 | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | 15,221 | 15,221 | 15,221 | 15,221 | 15,221 | | | |
| **TOTAL** | **198,109** | **198,109** | **198,109** | **198,109** | **198,109** | **198,109** | **198,109** | **198,109** |
| Suitable Timber Lands | 5,981 | 5,981 | 5,981 | 5,981 | 5,981 | 0 | 0 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Juneau Urban (305)

**ACRES (NFS):** 94.800

**BIOGEOGRAPHIC PROVINCE:** Lynn Canal, Northern Coast Range, and Ice Fields

**ECOLOGICAL SECTION:** Boundary Ranges, and Kootznoowoo Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 21

### I. Overview and Description

**(1) Location and Access:** This irregularly shaped area, located on the mainland near Juneau, extends north from the Lemon Creek area to Point Bridget State Park and Echo Cove. The closest community, Juneau, located immediately south, has regularly scheduled air service and is serviced by the Alaska Marine Highway. Land owned by the Borough and City of Juneau borders the area to the south. Land uses in this adjacent area tend to be urban in nature and there are roads in much of the area. The area is bordered to the east by the Skagway-Juneau Icefield Roadless Area. Glacier Highway, which runs generally north to south from Juneau to Echo Cove, is located along the west shoreline and provides relatively easy access to the entire area.

Glacier Highway and a number of roads in the Juneau area provide access to this roadless area. There are also a number of trails leading into the area. These include the Heintzleman Ridge Route, Montana Creek (#511), West Glacier (#513), Spaulding (#547) and Auke Nu (#680) trails, which originate along the south border of the area. The Peterson Lake (#535), Windfall Lake (#494), Herbert Glacier (#480), Amalga (#447), Yankee Basin, and Bessie Creek (#565) trails are accessed from Glacier Highway, which generally borders the west side of the roadless area. Juneau Airport is located south of this area.

**(2) History:** The Juneau Urban Roadless Area has a long history of inhabitation. Tlingit Natives lived in the area long before the Gold Rush days. Goldschmidt and Haas (1946) identified a variety of aboriginal uses along the shoreline adjacent to this roadless area, including salmon fishing and berrying, as well as smokehouse or cabin sites. The Gold Rush began in 1880 and spurred the rapid establishment of Juneau. Mining activities that flourished in that era diminished during World War II because of fixed gold prices, wartime inflation, and labor shortages. Increased participation in outdoor recreational pursuits and tourism opportunities began to take place in those areas that were historically accessed and developed by mining ventures. Current recreation use is generally high in this area and activities include hiking, fishing, hunting, picnicking, viewing scenery, mountaineering on glaciers, and other recreational activities. A recent surge in mineral exploration and development is currently underway.

**(3) Geography and Topography:** The area is generally characterized as being mountainous, forested, and, in places, deeply incised with steep-walled, glacially scoured valleys that extend from sea level to the Juneau Icefield. Glaciers and icefalls are the most dramatic features and, combined with the surrounding ridges of over 3,000 to 4,000 feet, provide topographic relief and extraordinary beauty. The area includes only 1 mile of saltwater shoreline, because the land along the coastline is either city and borough land or privately owned and/or roaded. A large part of the area is either ice and snow (11,946 acres), rock (13,731 acres), or alpine (1,971 acres). There are 387 acres of freshwater lakes in this area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. This area is located in three biogeographic provinces (Lynn Canal, Northern Coast Range, and Ice Fields). The majority of the area is located within the Lynn Canal Province. The topography in this area is typically rugged and glaciated. Rain shadows and the dominating influence of the continental climate make this the driest and seasonally warmest province in Southeast Alaska. Part of the southern portion of the area is located within the Northern Coast Range Province, which is characterized by little maritime influence and rugged and glaciated topography. A small

area along the east side of the Juneau Urban Roadless Area boundary is located within the Ice Fields Province, which is generally characterized by permanent ice fields, active glaciers, and nunatuks (mountain peaks between glaciers).

Ecological Section/Subsection. The Juneau Urban Roadless Area is divided almost equally between two Ecological Sections: Kootznoowoo Fjordlands (M247D) and Boundary Ranges. (M246B). These areas are represented by two ecological subsections, each covering about half of the area (see table below). The Stephens Passage Glaciomarine Terraces Ecological Subsection contains glaciomarine terraces that grade into mountain slopes. Estuaries and marshes can be found along the coastal areas of the terraces while hemlock-spruce forests dominate the mountain slopes. The second ecological subsection, Boundary Ranges Icefields, is underlain by a northwest-southeast trending batholith of resistant granite and granodiorite. This portion of the range 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 rivers (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kootznoowoo Fjordlands | Stephens Passage Glaciomarine Terraces | 55% |
| Boundary Ranges | Boundary Ranges Icefields | 45% |

**(b) Soils:** Alpine portions of this area consist of shallow to bedrock soils primarily of organic and mineral origin. The majority of the area's soils range from well-developed, deep, colluvial soils on moderate to steep slopes; shallow to bedrock colluvial soils that are well-drained and developed on very steep slopes; and poorly drained mineral and/or organic soils on benches and moderate slopes. Muskeg occurs on some of these benches. The entire area has been overridden by glaciers with a predominance of glacial materials throughout, but especially on middle to lower slopes.

**(c) Vegetation:** Hemlock/spruce rain forests, muskegs, alder thickets, alpine slopes, and riparian zones can be found in this diverse area. There are 1,971 acres of alpine vegetation that have been mapped in the Juneau Urban Roadless Area. Approximately 1,056 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 57,013 acres mapped as forest land, of which 34,833 acres (61 percent) are mapped as productive old-growth forest. Of the productive old growth, 14,013 acres or 40 percent are mapped as high-volume old-growth forest. The productive old growth includes about 3,264 acres of high-volume, coarse-canopy old growth. There is no second growth due to timber harvest mapped in the 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. Seven VCUs in the area were rated as high value for sport fish. Three of these VCUs were also rated as high value for commercial fish, with one also identified as a high value estuary. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed six VCUs as having high sportfish productivity and three VCUs as primary pink salmon producers.

Coho, chum, and pink salmon are found in this area along with Dolly Varden, steelhead, and cutthroat trout. The major fish bearing streams include Eagle and Herbert Rivers, Cowee Creek, and Montana Creek.

**(e) Wildlife Resources:** Wildlife populations are typical of the mainland areas surrounding Juneau and include numerous waterfowl and upland birds, deer, and wolves. Mountain goats occupy the higher elevations during summer months, generally moving to lower elevations during heavy snow periods. Furbearers are found throughout the area, as are both black and brown bear.

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

| LUD | Acres |
|---|---|
| Scenic Viewshed | 25,962 |
| Minerals* | 45,329* |
| Transportation and Utility System | NA |
| Semi-remote Recreation | 49,526 |
| Remote Recreation | 9,167 |
| Special Interest Area | 6,722 |
| Old-growth Habitat | 3,422 |

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

Approximately 27 percent of this roadless area (not including the LUD overlays) was allocated to one development LUD, Scenic Viewshed. Approximately 48 percent of the roadless area was allocated to the Minerals LUD overlay. In addition, an electric transmission line corridor running the length of the area was assigned to the Transportation and Utility System LUD overlay. The 1997 LUD map identifies both an existing and a potential transmission line corridor in this area.

Approximately 73 percent of the roadless area was allocated to non-development LUDs (Semi-remote Recreation, Remote Recreation, Special Interest Area, Old-growth Habitat). Most of the roadless area, approximately 52 percent, was allocated to the Semi-remote Recreation LUD. Approximately 10 percent of the roadless area was allocated to the Remote Recreation LUD. Approximately 7 percent of the roadless area, around Mendenhall Lake, area was allocated to the Special Interest Area (SIA) LUD. This SIA is known as the Mendenhall Glacier Recreation Area. Approximately 4 percent of this roadless area was allocated to the Old-growth Habitat LUD.

The Juneau Urban Roadless Area is heavily used for recreation. Glacier Highway and a number of roads in the Juneau area provide access to this roadless area. Public recreation facilities include four public recreation cabins and a number of trails that provide access to the area. Five trails provide access from the south side of the area. Six other trails provide access from Glacier Highway, which generally borders the area to the west. Part of the Mendenhall Glacier Recreation area is included in this roadless area and includes some of the most used trails on the north part of the Forest. A major visitor center and large campground are within the Recreation Area and adjacent to this roadless area.

Many of the special use permits in the area are associated with recreational outfitter and guide activities. In 1987, management guidelines for helicopter landing tours on the Juneau Icefield were developed and several helicopter companies are currently authorized to conduct landing tours on the Icefield and glaciers within this roadless area. The Forest Service has authorized commercial helicopter landing tours on the Juneau Icefield from 2003 through 2007. Icefield landing sites within or immediately adjacent to this area include Mendenhall, Herbert, and Eagle Glaciers. Guided rafting trips are permitted across Mendenhall Lake to access Mendenhall River.

There are Special Use Permits for communication sites for AT&T on Mt. Bessy and for Auck Mountain. The Forest Service also uses Auck Mountain as a communication site. The 1997 Tongass Land and Resource Management Plan allocated a site on Heintzleman Ridge for a future communication site for television, radio, or cellular telephone towers and buildings.

There is a Special Use Permit for an access road on National Forest System land issued to Glacier Gardens, a popular local attraction. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that with the exception of parts of VCUs 23 (Canyon Creek) and 24 (Cowee Creek), the Juneau Urban Roadless Area is typically not used for subsistence.

Two fish enhancement projects, completed in 1990, established several small rearing ponds adjacent to the Eagle River, and introduced large woody debris into the Windfall Creek channel. A fishpass was completed at Lena Cove in 1992.

**(6) Appearance (Apparent Naturalness):** The area offers spectacular scenery and opportunities to view wildlife and vegetation. However, existing modifications and ongoing activities are apparent to visitors and affect the natural appearance of this area. Existing modifications in the area include trails, recreation cabins, and historic mining remains. Ongoing activities include helicopter landing tours.

The area is visible from a number of locations including several Visual Priority Routes and Use Areas, which are identified in Section II (6). Visual Priority Routes include Lynn Canal and Favorite Channel, which are both part of the Alaska Marine Highway, as well as several public use roads, including Glacier Highway. The area is also visible from a number of Use Areas, including Mendenhall Recreation Area and the public recreation cabins and hiking trails within the area.

**(7) Surroundings (External Influences):** External influences that affect this roadless area include the Juneau Road System and the Borough and City of Juneau, the numerous flight paths and air traffic in the area, and an urban population that uses the area extensively. In addition, the area is bordered to the west by Glacier Highway property owned by Native Corporations and other private entities. Gastineau Channel and Lynn Canal, both busy waterways for ferries, cruise ships, and private and commercial vessels, are visible from locations within the area.

**(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 country are all attractions. The proximity to the Juneau Icefield and the numerous glaciers offer unparalleled scenery and opportunities for mountaineering, skiing, ice and rock climbing, camping, and scenic viewing. The Mendenhall Glacier Recreation Area at the southern end of the roadless area, adjacent to Juneau, was designated as a Special Interest Area to recognize these assets and may be managed to promote public use as well as scientific research. In total, the area contains 18 inventoried recreation places, which cover 49,882 acres, or 53 percent of the roadless area.

High-quality fishing opportunities in the streams and lakes are also an attraction. There are numerous improved trails in the area and four public recreation cabins.

An area near the junction of Cowee Creek and Canyon Creek has been declared a landmark tree site as part of the Landmark Trees Project on the Tongass National Forest. This area had one of the highest scoring Old-Growth Tree sites recorded on the Forest. Another site, near Windfall Lake, was lower in the scoring.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The boundaries of this roadless area have changed in three ways between 1989 and 2003. First, the section of the Glacier Highway that follows the coastline at Fairhaven is now excluded from the area. As a result, the roadless area no longer includes any saltwater shoreline area. Second, the north boundary of the area has been altered to exclude an area designated LUD II in the Tongass Timber Reform Act that is now part of Roadless Area 301. Third, several adjustments were made to the boundary between the Draft and Final SEIS to improve manageability in those areas. Most notable of these adjustments include dropping the area generally south of Mendenhall Lake from the roadless area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area is modified by public recreation cabins, numerous trails, and past and present mining claims. In addition, air traffic by regularly scheduled air operators, flightseeing tours, and helicopter landing tours all affect natural ecological processes and conditions within the area. Despite these developments within the area, the majority of the area appears natural and its natural integrity is high. This characteristic, coupled with the area's high scenic and recreation values and its proximity to Juneau, suggest that much of the roadless area may be appropriate and valuable for wilderness.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is not a moderate opportunity for solitude and a high opportunity for primitive recreation in this area, especially when the adjacent roadless lands are factored in. Frequent air traffic by jets, small planes, and helicopters is usually present. Noise from the Juneau Road System can be heard in much of the area. The trails and public recreation cabins in the area are generally considered to be highly used, and contact with other users is common.

There are four public recreation cabins in the area, and numerous trails, which tend to focus recreational use in the area. Hunters and fishers also use the area quite extensively.

The Mendenhall Glacier Recreation Area at the southern end of the roadless area provides unparalleled scenery and opportunities for mountaineering, skiing, and ice and rock climbing. It is managed to maintain a natural or near natural setting and may be managed to promote public use.

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 |
|---|---|---|
| Primitive (P) | 36,779 | 39% |
| Semi-Primitive Non-Motorized (SPNM) | 38,703 | 41% |
| Semi-Primitive Motorized (SPM) | 14,456 | 15% |
| Roaded Natural (RN) | 3,974 | 4% |
| Roaded Modified (RM) | 406 | 0% |
| Rural (R) | 129 | 0% |
| Urban (U) | 174 | 0% |

The area contains 18 inventoried recreation places, which cover 49,882 acres, or 53 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPNM | 5 | 33,631 |
| SPM | 4 | 14,093 |
| RN | 7 | 1,449 |
| RM | 3 | 406 |
| R | 2 | 128 |
| U | 1 | 174 |

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

Recreation attractions just west of the roadless area include Point Bridgett State Park, Gruening State Historic Park, Mendenhall Wetlands State Game Refuge, and Tee Harbor.

**(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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Juneau Urban Roadless Area was given a rating of 17 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 21. This rating reflects the high natural integrity and apparent naturalness of the area, despite the very high use level, which occurs within and near the area.

**(4) Ecologic and Geologic Values:**

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 24, 25, 27, 28, and 29, along Lynn Canal, as primary sportfish producers. VCUs 26, 27, and 28 were also identified as primary salmon producers (ADF&G, 1998).

Coho, chum, and pink salmon are found in this area along with Dolly Varden, steelhead, and cutthroat trout.

Cowee Creek and Herbert River are the most productive streams in this system, with an estimated annual peak escapement of 13,200, and 4,400 pink salmon, respectively. Montana Creek and Herbert River have excellent coho salmon smolt production capability (ADF&G, 1998).

Two fish enhancement projects, completed in 1990, established several small rearing ponds adjacent to the Eagle River, and introduced large woody debris into the Windfall Creek channel. A fishpass was completed at Lena Cove in 1992.

**(b) Wildlife Resources:** Wildlife populations are typical of the mainland areas surrounding Juneau and include numerous waterfowl and upland birds. Sitka black-tailed deer populations are affected by severe winter conditions and generally high predator populations. Mountain goats occupy the higher elevations during summer months, generally moving to lower elevations during heavy snow periods. Furbearers are found throughout the area, as are wolves and both black and brown bear. Based on harvest data compiled from 1985 to 1994, one of the VCUs partially located in this area (VCU 25, along the coast) was identified within the second 25 percent of black bear harvest areas on the Tongass (ADF&G 1998).

Moose have not been reported in this area. Two species of peregrine falcon may migrate through the 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, 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. Glaciers in this area include parts of Eagle, Herbert, and Mendenhall Glaciers. There are no other known unique geologic features.

**(5) Scientific and Educational Values:** The glaciers and surrounding scenery are the most significant special features of the area. There are no existing or proposed Research Natural Areas within the area. Mendenhall Glacier Recreation Area, which is partially within the area, has been identified as a Special Interest Area. This designation is intended to protect areas with unique cultural, geological, botanical, zoological, recreational, scenic, or other special features.

**(6) Scenic Values:** The area offers spectacular scenery and opportunities to view wildlife and vegetation. Glaciers and icefalls are the most dramatic features and, combined with the surrounding ridges of over 3,000 to 4,000 feet, provide topographic relief of extraordinary beauty. Mendenhall Glacier Recreation Area, just north of Juneau, was established to recognize these values and may be managed for public use as well as scientific research. However, existing modifications and ongoing activities are apparent to visitors and affect the natural appearance of this roadless area. Existing modifications in the area include trails, recreation cabins, and historic mining remains. Ongoing activities include helicopter landing tours.

A number of Visual Priority Routes and Use Areas identified by the Forest Plan are within or adjacent to the Juneau Urban Roadless Area. Visual Priority Routes include Lynn Canal (Alaska Marine Highway and Tourship Route), Favorite Channel (Alaska Marine Highway and Small Boat Route), and Glacier Highway (FH#2), Mendenhall Glacier Road (FH#37), Montana Creek Road (#8452), and Peterson Creek Road (#8442) (Public Use Roads). Use Areas include Shelter Island (State Marine Park), Favorite Channel (Saltwater Use Area), Echo Cove/Sawmill Cove and Shelter Island (Dispersed Recreation Areas), Juneau (Community), Peterson Lake, John Muir, Eagle Glacier, and Windfall Lake cabins (Public Recreation Cabins), Mendenhall Recreation Area, Auke Village Campground, and Auke Bay Recreation Area (Developed Recreation Areas), Montana Creek (#511), West Glacier (#513), Auke Nu (#680), Peterson Lake (#535), Windfall Lake (#494), Herbert Glacier (#480), Amalga (#447), Yankee Basin, Spaulding (#547), and Bessie Creek (#565) (Hiking Trails), and Auke Bay and Echo Cove (Boat Anchorages).

Approximately 44 percent of the area was inventoried in Variety Class A (possessing landscape diversity that is unique for the character type) and 39 percent of the acreage was inventoried in Variety Class B (possessing landscape diversity that is common for the character type). Approximately 16 percent was categorized in Variety Class C (possessing a low degree of landscape diversity).

The vast majority (98 percent) of this roadless area is in Existing Visual Condition (EVC) I and appears untouched by human activity. Approximately 1 percent of the area appears to be untouched by human activity and is in EVC Type II. Another 1 percent is in EVC III. These areas are where changes in the landscape are noticed by the average person but do not attract attention. The natural appearance of the landscape still remains dominant.

**(7) Social, Cultural, and Historical Values:** The Juneau Urban area has a long history of habitation. Tlingit Natives lived in the area long before the Gold Rush days which began in 1880 and spurred the rapid establishment of Juneau. Mining activities that flourished in that era diminished during World War II because of fixed gold prices, wartime inflation, and labor shortages. Increased participation in outdoor recreational pursuits and tourism opportunities began to take place in those areas which were originally accessed and developed, in previous years, by mining ventures. A recent surge in mineral exploration and development is currently underway. The closest community is the City of Juneau, located immediately south.

The area receives heavy recreation use. Public recreation facilities include four public recreation cabins and a number of trails that provide access to the area. Five trails provide access from the south side of the area. Six other trails provide access from Glacier Highway, which generally borders the area to the west. Hunters and fishers also use the area quite extensively. There was no outfitter/guide use identified in the area in 1999. Part of the Mendenhall Glacier Recreation area is included in this roadless area and includes some of the most used trails on the north part of the forest. A major visitor center and large campground are within the Recreation Area and adjacent to this roadless area. The Forest Service has authorized commercial helicopter landing tours on the Juneau Icefield from 2003 through 2007. Icefield landing sites within or immediately adjacent to this area include Mendenhall, Herbert, and Eagle Glaciers. Guided rafting trips are permitted across Mendenhall Lake to access Mendenhall River. Guided hiking has also become popular in the area.

Based on harvest data compiled from 1985 to 1994, one of the VCUs partially located in this area (VCU 25) was identified within the top 25 percent of black bear harvest areas on the Tongass. Three other VCUs that are all or partially within the area (VCUs 24, 26, and 27) were identified in the second 25 percent.

The Tongass Fish and Wildlife Resource Assessment indicated that with the exception of parts of VCUs 23 (Canyon Creek) and 24 (Cowee Creek), the Juneau Urban Roadless Area is typically not used for subsistence. Two of the VCUs partially located in this area (VCUs 23 and 24 in the northern part of the roadless area) were included among the highest value community use areas. No VCUs were listed among the VCUs with highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

**(8) Manageability and Boundary Conditions/Changes:** The area is adjacent to the Skagway-Juneau Icefield Roadless Area and, because of the nature of the glaciers and Icefield, the areas covered with glaciers and ice at the higher elevations will undoubtedly remain roadless. The Juneau Urban Roadless Area generally falls below the 3,000 to 4,000-foot elevation of the Juneau Icefield. Boundaries formed by City and Borough of Juneau lands are less well defined and are not easily locatable on the ground. The lower elevation area, which is affected by easy access from the Juneau Road System and Glacier Highway, could be more 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 spectacular scenery, relatively easy access to the area, and opportunity to view and/or harvest fish and wildlife make this roadless area very attractive and provides almost unlimited recreation potential. Recreation opportunities include both developed and dispersed projects.

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

**(3) Fish Resource:** Two fish enhancement projects, completed in 1990, established several small rearing ponds adjacent to the Eagle River, and introduced large woody debris into the Windfall Creek channel. A fishpass was completed at Lena Cove in 1992. No new fish enhancement projects are currently proposed.

**(4) Wildlife Resources:** There are no wildlife habitat enhancement projects currently proposed in this roadless area.

**(5) Timber Resources:** There are approximately 34,833 acres mapped as productive old growth and no acres mapped as second growth due to harvest in the roadless area. Of these acres, 28,161 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), 3,256 acres (3 percent) of this roadless area are estimated to be suitable for timber production. Approximately 1,250 of the suitable acres are mapped as high-volume old growth; of these acres, 200 are mapped as high-volume, coarse-canopy old growth.

The Cowee-Davies Timber Sale, located in this roadless area, was halted during the appeal process because the court deemed an environmental impact statement necessary. Timber sales within this area would be controversial because of its proximity to Juneau and the high recreation use of the area.

Designating this area wilderness would not be likely to affect potential timber harvest activities in nearby areas because it would not block any potential transportation routes. Glacier Highway borders the area to the west and timber harvest is unlikely to occur in the Skagway-Juneau Icefield Roadless Area to the east.

**(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 encompasses much of what is known as the Juneau Gold Belt and is recognized as an area of high mineral development potential, priority one. Over 85 mining claims are within or adjacent to the Eagle and Herbert River corridors and many others are located in Yankee Basin.

The west portion of the area was allocated to the Minerals LUD, which is a secondary designation that overlays one or more primary LUD designations. 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. The Minerals LUD is also intended to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when minerals development occurs. Designating the area wilderness could affect potential mining activities within the area, as well as within non-National Forest System inholdings.

The roadless area contains 57,219 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). Of these identified acres, 45,329 acres are allocated to the Minerals LUD. In addition, this roadless area contains an estimated 64,472 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:** An electric transmission line corridor running the length of the area was assigned to the Transportation and Utility System LUD in the 1997 Tongass Land and Resource Management Plan.

An extension of the Veteran's Memorial Highway from Echo Cove to Cascade Point is under consideration. A Forest Service right-of-way has been granted. When constructed, this road will cross short segments of National Forest System lands and will influence the edge of the roadless area in the vicinity.

**(9) Water Availability and Use:** The public recreation cabins and Mendenhall Recreation Area create some 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:** The glaciers and surrounding scenery are the most significant special features of the area. There are no existing or proposed Research Natural Areas within this roadless area. Mendenhall Glacier Recreation Area, which is partially within the area, has been identified as a Special Interest Area in the Forest Plan.

**(11) Land Use Authorizations:** Special use permits for this area are issued primarily for outfitter and guide activities. There are Special Use Permits for communication sites for AT&T on Mt. Bessy and Auck Mountain. The Forest Service also uses Auck Mountain as a communication site. The 1997 Tongass Land and Resource Management Plan allocated a site on Heintzleman Ridge for a future communication site for television, radio, or cellular telephone towers and buildings.

There is a Special Use Permit for an access road on National Forest System land issued to Glacier Gardens, a popular local attraction.

**(12) Land Status:** All lands within the roadless area are part of the National Forest System. Encumbered land within the roadless area is located near Tee Harbor.

## 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 a variety of recreational activities, both motorized and non-motorized, including hunting, fishing, viewing scenery, and activities in support of tourism. There is local interest and concern regarding availability of firewood.

**(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 Juneau Urban Roadless Area. In 2001, HR 2908 identified part of the north portion of the area as a Proposed Wilderness Addition. The bill identified the remainder of the area as a proposed LUD II addition. The bill also proposed that Davies Creek, Cowee Creek, Eagle River, and Herbert River receive Wild and Scenic River designation. It also identified two short lengths of road corridor as restoration areas. These roads and corridors extend into but are not part of the roadless area.

**(c) Public Input During Forest Plan Revision and Appeals:** Many letters received about the Juneau area and the Juneau Urban Roadless Area opposed the application of the Minerals LUD to the area because mining would conflict with the area's scenic and recreation values. Several local conservation groups (including Alaskans for Juneau, Audubon Society, Sierra Club, Taku Conservation Society, Southeast Alaska Conservation Council) expressed similar concerns on this issue. Specific areas, such as the Eagle and Herbert Glacier trails, as well as the entire area, were mentioned for withdrawal from this LUD. Many commenters also opposed any timber harvest allocations (especially at Cowee Creek) citing recreation and hunting/subsistence conflicts. Other areas mentioned where recreation values should take precedence included Spaulding Meadow, Windfall Lake, and the ocean shoreline from Tea Harbor north. Several commenters, including the Goldbelt Corporation, were concerned that LUD designations in the area be compatible with possible development of their lands.

**(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 primary issue commented on the Helicopter Landing Tours on the Juneau Icefields EIS was the helicopter noise in Juneau. There were concerns regarding the effect of noise on Juneau residents, wildlife, and recreationists. The commenters were both for and against commercial recreation on the icefields and glaciers.

**(f) Public Input Expressed During Supplemental EIS Process:** The Landmark Trees Project noted that there is an example of streamside Landmark Forest on Cowee Creek, north of Juneau. They commented that the 1-acre stand contains 5 spruces between 180 and 200 ft. tall and most are greater than 150 ft and there were tracks of sow and cub brown bear. It is the finest forest they have found on the northern Tongass.

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 areas 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.

A Juneau Area Assemblyman recommended Cowee and Davies Creeks watersheds for designation as wilderness. He also recommended Benjamin Island for designation as wilderness. Benjamin Island is not included in any of the roadless areas but is close to Roadless Area 305.

Many individuals wanted the Cowee and Davies Creek drainages on the south side of Berners Bay to be protected from timber harvesting (the areas are partially open now). Some also identified Yankee Basin, Windfall Lake, Peterson Lake, Herbert River, and upper Montana Creek as being important fish and wildlife corridors worthy of protection. Some individuals wanted Cowee and Davies Creeks drainages to be protected as LUD II or wilderness.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Juneau Urban Roadless Area is part of a larger mainland roadless area that runs from the international border north of Skagway to Misty Fiords National Monument Wilderness and the international border to the south. The Skagway-Juneau Icefield Roadless Area borders the area to the east. The Chilkat-West Lynn Canal Roadless Area is located west across Lynn Canal from the area. The Endicott River Wilderness also located west across Lynn Canal is the closest wilderness area.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | <5 | 15 |
| Sitka (Pop. 8,835) | 95 | 150 |
| Hoonah (Pop. 860 | 30 | 60 |
| Angoon (Pop. 572) | 60 | 80 |

The nearest stop on the Alaska Marine Highway is the Auke Bay Ferry Terminal in Juneau.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Juneau Urban Roadless Area is irregularly shaped. It is located on the mainland near Juneau and extends north from the Lemon Creek area to Point Bridget State Park and Echo Cove. Land owned by the Borough and City of Juneau borders the area to the south. The area is bordered to the east by the Skagway-Juneau Icefield Roadless Area. The area is generally characterized as being mountainous, forested, and, in places, deeply incised with steep-walled, glacially scoured

valleys that extend from sea level to the Juneau Icefield. Glaciers and icefalls are the most dramatic features and, combined with the surrounding ridges of over 3,000 to 4,000 feet, provide topographic relief of extraordinary beauty. Rivers in the area include Davies Creek, Cowee Creek, Eagle River, and Herbert River.

The area is mostly natural appearing and unmodified; however, it is influenced by the urban developments and activities associated with Juneau. The natural integrity and apparent naturalness of the area is rated very high. The opportunity for solitude is moderate and the opportunity for primitive recreation is high.

The area has very high scenic quality; approximately 44 percent of the landscape is considered distinctive for the character type from a scenery standpoint. Glaciers in this area include parts of Eagle, Herbert, and Mendenhall Glaciers. There are no other known unique geologic features. The Mendenhall Glacier Recreation Area is managed as a Special Interest Area under the Forest Plan to promote recreation and research. The area's proximity to Juneau and its heavy tourism traffic, along with its outstanding scenic and geologic resources, is a special value of the area. The area also has a rich history related to the mineral resources associated with the area.

The roadless area includes about 14,013 acres of high-volume, old-growth forest. Of these acres, 3,264 are mapped as high-volume, coarse-canopy old growth.

The Juneau Urban Roadless Area lies partially within the Ice Fields, Lynn Canal, and Northern Coast Range Biogeographic Provinces. Approximately 55 percent of the roadless area is within the Ice Fields Province and makes up about 2 percent of that province. It is one of nine inventoried roadless areas found in the province that collectively 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. Another 20 percent of the Juneau Urban Roadless Area lies within the Lynn Canal Province and makes up about 3 percent of the province. It is one of four inventoried roadless areas that collectively make up about 77 percent of the province. The Endicott River Wilderness makes up about 15 percent of the Lynn Canal Province, and the Berners Bay LUD II area makes up another 6 percent of the province. The last 25 percent of the Skagway-Juneau Roadless Area is located within the Northern Coast Range Province and makes up about 2 percent of the province. It is one of six inventoried roadless areas found in the province that collectively make up about 66 percent of the province. Portions of the Chuck River and Tracy Arm-Fords Terror Wildernesses are within the province and make up about 23 percent of the province.

The Juneau Urban Roadless Area lies within two ecological sections; it represents 4 percent of the Kootznoowoo Fjordlands Ecological Section and 1 percent of the Boundary Ranges Ecological Section. Both of these ecological sections are well represented by existing wilderness (78 and 33 percent, respectively), with an additional 11 and 61 percent, respectively, in other existing non-development LUDs and 1 percent each in LUD II.

Approximately half of this roadless area (55 percent) is within the Stephens Passage Glaciomarine Terraces Ecological Subsection. This portion of the roadless area represents 18 percent of the entire ecological subsection, which is well represented in existing wilderness (36 percent), with an additional 5 percent in LUD II and 31 percent in other non-development LUDs. The remainder of this roadless area (45 percent) is within the Boundary Ranges Icefields Ecological Subsection; this portion of the roadless area represents 1 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 Juneau Urban 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 five other roadless areas) among the 109 Tongass inventoried roadless areas.

There is considerable local and national support for management of the area in an unroaded condition, and some national support for wilderness designation for at least a portion of this area. Designation would create a wilderness with very high scenic and geologic interest values that are sought out by the large numbers of visitors to Juneau. This very high use, coupled with the ongoing development and activities associated with the urban area of Juneau, would be in conflict with wilderness objectives. 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 Juneau Urban Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 is implemented. Approximately 73 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 27 percent. The land in the development LUDs provides an estimated 3,256 acres that are suitable for timber production (8 percent of the suitable land on the Juneau Ranger District). Approximately 200 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains 57,219 acres of land identified as a mineral activity tract having a high potential for expanding mineral exploration or development of locatable minerals. In addition, the roadless area contains an estimated 64,472 acres of undiscovered locatable mineral resources that are considered to have low potential for development. Recreation and special uses would continue, including the very high tourism-related activities. The values associated with natural settings could be affected by timber management activities in the northern portions of the area. The geologic and most scenic values would be protected under the Forest Plan.

Under Alternative 6, most of the roadless area, 74,445 acres, would be converted to Recommended LUD II and the northern portion would be converted to Recommended Wilderness LUD. No timber harvest would be allowed. The potential for other uses and development, including recreation, some special uses, and minerals, could be restricted in the Recommended Wilderness area. 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 geologic values, would be provided long-term protection if designated LUD II or wilderness.

Under Alternative 7, a 20,355-acre portion of the roadless area currently allocated to Old-growth Habitat and Scenic Viewshed LUDs would be converted to Recommended Wilderness. No timber harvest would be allowed and the potential for other uses and development, including recreation, some special uses, and minerals, could be restricted within the Recommended Wilderness LUD. Lands suitable for timber production in the roadless area would be reduced to approximately 1,380 acres. 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 northern portion of the roadless area, including the scenic 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. No timber harvest would be allowed and the potential for other uses and development, including recreation, some special uses, and minerals, 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 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 305 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | 20,355 | 20,355 | 94,800 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Non-wilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | 6,722 | 6,722 | 6,722 | 6,722 | 6,722 | | 6,722 | |
| Remote Recreation | 9,167 | 9,167 | 9,167 | 9,167 | 9,167 | | 9,166 | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | 3,422 | 3,422 | 3,422 | 3,422 | 3,422 | | 946 | |
| Semi-remote Recreation | 49,526 | 49,526 | 49,526 | 49,526 | 49,526 | | 49,526 | |
| Recommended LUD II | | | | | | 74,445 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 25,962 | 25,962 | 25,962 | 25,962 | 25,962 | | 8,084 | |
| Modified Landscape | | | | | | | | |
| Timber Production | | | | | | | | |
| **TOTAL** | **94,800** | **94,800** | **94,800** | **94,800** | **94,800** | **94,800** | **94,800** | **94,800** |
| Suitable Timber Lands | 3,256 | 3,256 | 3,256 | 3,256 | 3,256 | 0 | 1,380 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Mansfield Peninsula (306)

**ACRES (NFS):** 51,988

**BIOGEOGRAPHIC PROVINCE:** Admiralty Island

**ECOLOGICAL SECTION:** Kootznoowoo Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 20

## I. Overview and Description

**(1) Location and Access:** This area is located on the Mansfield Peninsula, which is the northernmost portion of Admiralty Island. The area is bordered by saltwater to the north, east, west, and part of the south. Lynn Canal/Chatham Strait borders the area to the west. Funter Bay State Marine Park, an area of State-owned land on the west side of the peninsula, also borders the area to the west. Stephens Passage/Saginaw Channel borders the area to the east. The area is bordered to the south by Hawk Inlet and the Greens Creek Mine access road, which separates the area from the adjacent Greens Creek Roadless Area. It is approximately 3 miles from the eastern shore of the peninsula to the west side of Douglas Island and approximately 10 miles to Auke Bay/Juneau.

The area is accessed primarily by private boats and float planes and helicopters. There are no places suitable for landing wheeled airplanes, and there is no public transportation to the area. Juneau has regularly scheduled air service and is the closest stop on the Alaska Marine Highway. Several excellent anchorages are found adjacent to the peninsula, including Funter Bay, Hawk Inlet, and Barlow Cove. Access into the interior is by foot or helicopter. There are several trails used to access 11 isolated, privately owned hunter or recreation residence cabins located within the area. The area also includes Bear Creek Trail and part of the old Hawk Inlet Road, which is now being used as a trail.

**(2) History:** The Mansfield Peninsula has had a long history of use. Native use of the area focused on fishing and hunting. Goldschmidt and Haas (1946) identified commercial fish traps along the west shore of the peninsula. They also identified hunting or trapping, a former camp, and a former village in the area. More recent history reveals the importance of mining in the area. Much of the peninsula contains evidence of active or historic mining claims. The remains of an old, fire-damaged cannery are evident on the eastern shore of Hawk Inlet adjacent to this roadless area. The cannery, built in 1911, burned in 1976. The remaining buildings are owned by the Bristol Bay Native Corporation.

**(3) Geography and Topography:** The area is generally characterized by low-elevation, relatively flat topography with two rugged mountain peaks over 3,100 feet. The area contains 62 miles of shoreline on saltwater, as well as 76 acres of alpine and 1,637 acres of rock. The roadless area also contains one island totaling 58 acres.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Admiralty Island Biogeographic Province. This province represents a modal environment, with relatively gentle topography and moderate rainfall. Winter conditions are moderated by the surrounding marine environment. All forest plant associations, except those in the Western red-cedar series, those found around large mainland rivers, and those occurring only on outer coastal areas, occur in this province. Forest productivity is high. Fresh and saltwater marshes in the numerous bays and inlets and bog communities are abundant.

Ecological Section/Subsection. The Mansfield Peninsula Roadless Area is contained entirely within the Kootznoowoo Fjordlands Ecological Section (M247D). This area is represented by two ecological subsections (see table below). The Stephens Passage Glaciomarine Terraces Ecological Subsection covers about two-thirds of the roadless area. It contains glaciomarine terraces that grade into mountain slopes.

Estuaries and marshes can be found along the coastal areas of the terraces, while hemlock-spruce forests dominate the mountain slopes. The North Admiralty Complex Ecological Subsection, slightly larger than a third of the roadless area consists of a series of narrow ridges and mountains separated by steep U-shaped valleys. The soils are generally shallow and rocky and support vegetation communities such as subalpine barrens, meadows, and brushfields. Landslides and avalanche chutes are common in the forested areas of the lower slopes (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kootznoowoo Fjordlands | Stephens Passage Glaciomarine Terraces | 62% |
| | North Admiralty Complex | 38% |

**(b) Soils:** Much of the area's soils range from well-developed, deep colluvial soils on moderate to steep slopes, through shallow to bedrock colluvial soils that are well-drained and developed on very steep slopes, to poorly drained, mineral and/or organic soils on benches and moderate slopes. Muskegs with reduced productivity also occur in this area.

**(c) Vegetation:** Lower slopes are generally densely forested with typical spruce/hemlock forest, but sometimes exhibit a combination of muskeg openings, brush, and scattered tree cover up to approximately 2,500 feet in elevation. Approximately 1,878 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 47,426 acres mapped as forest land, of which 25,794 acres or 54 percent are mapped as productive old-growth forest. Of the productive old growth, 8,090 acres or 31 percent are mapped as high-volume old-growth forest. The productive old growth includes about 2,111 acres of high-volume, coarse-canopy old growth. There is no second growth due to timber harvest in this area.

**(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. None of the VCUs in this area were rated of high value for either sport or commercial fish. Two VCUs were, however, rated as high-value estuaries. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed one VCU as a primary sportfish producer and another as a non-producer. The remaining VCUs were identified as secondary producers.

Streams in this area provide habitat for coho, pink, and chum salmon, as well as steelhead trout and Dolly Varden char. The Anadromous Waters Catalogue and Atlas (ADF&G, 2000) shows 14 fish-bearing streams in this roadless area, the most productive being Bear and Funter Creeks.

**(e) Wildlife Resources:** The Mansfield Peninsula supports a large population of brown bear as well as Sitka black-tailed deer. Wolves may also be present (MacDonald and Cook, 1999). Smaller animals include furbearers such as mink, marten, and beaver. Black bears are not present on Admiralty Island, and neither moose nor mountain goats have been reported in this area.

**(f) Threatened, Endangered, and Sensitive Species:** The area is not known to contain any threatened or endangered species. Goshawks, a sensitive species, are found in this area.

**(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 two LUDs are Minerals and Semi-remote Recreation. The Minerals LUD is a secondary LUD, which overlays the other land use.

Semi-remote Recreation, a non-development LUD, covers 100 percent of the roadless area. Approximately 21 percent of the roadless area was allocated to the Minerals development LUD overlay. The Minerals LUD overlay is located in stretch of land extending from Funter Bay to Hawk Inlet.

| LUD | Acres |
|---|---|
| Minerals* | 11,074* |
| Semi-remote Recreation | 51,988 |

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

There are 11 isolated cabins or recreation residences under special use permit in this area, and most are accessed from the eastern shoreline, which is closest to Juneau. There are numerous active mining claims found within this roadless area. There is a private road from Funter Bay to the Admiralty-Alaska Mine. Hunting and mineral prospecting are the primary activities in the area. Several outfitter/guide companies have Special Use Permits to operate in this area.

There are no public recreation cabins but there are several trails used to access recreation residences, as well as Bear Creek Trail and part of the old Hawk Inlet mining road, which is now being used as a trail.

There is subsistence use in the area.

**(6) Appearance (Apparent Naturalness):** Although parts of the area have been modified by mining claims, access routes to these claims, and recreation residence cabins, the natural appearance of the landscape appears dominant. The area appears to be in a natural state when viewed from Lynn Canal, Saginaw Canal, Funter Bay State Marine Park, Barlow Cove, and the hiking trails within the area. Viewed from Hawk Inlet, the roadless area itself appears unmodified, but the Greens Creek Mine access road that partially borders the area to the south may affect the perceived naturalness of the landscape.

**(7) Surroundings (External Influences):** External influences include the Greens Creek Mine located south of the area. The Greens Creek Mine access road forms part of the south boundary of the Mansfield Peninsula Roadless Area and traffic using this road is visible from a number of locations within the area. Land at the Point Retreat Lighthouse on the northern tip of the peninsula belongs to the Point Retreat Lighthouse Association. The Funter Bay State Marine Park is located to the west of this roadless area.

Stephens Passage and Lynn Canal/Chatham Strait, which border the area to the east and west, respectively, are both part of the Alaska Marine Highway. Ferries, cruise ships, and other boats traveling these and other surrounding waterways are also visible from locations within the area. In addition, commercial airline jets, helicopters, and small planes fly over Mansfield Peninsula on regular flight paths and often at low altitudes. The area is located approximately 10 miles west of Juneau and mainland development. Development on nearby Douglas Island may be visible from parts of the roadless area as well.

**(8) Attractions and Features of Special Interest:** Primary attractions in this area include good anchorages and high-quality hunting and fishing opportunities in a location that is easily accessible from Juneau. The area contains seven inventoried recreation places, which cover 32,797 acres, or 63 percent of the roadless area. There are two trails in the area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The primary change is the expected conveyance of 1,505 acres of land at the Point Retreat Lighthouse on the northern tip of the peninsula. Title to the land will be transferred to the Point Retreat Lighthouse Association. Also, several islands and private lands along the shore of the peninsula have been placed outside the roadless area boundary.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** Although parts of the area have been modified by mining claims, access routes to these claims, and recreation residence cabins, the natural appearance of the landscape appears dominant. This suggests that the area's appearance is suitable for wilderness classification. The natural integrity of the area is very high and the apparent naturalness of the area is considered high.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is moderate opportunity for solitude within the area because of the numerous floatplanes, helicopters, boats, ferries, and cruise ships traveling to, near, or over the peninsula. There is a relatively high opportunity for primitive recreation in the area.

The Funter Bay State Marine Park borders the area to the west. There are no public recreation cabins in the area but there are 11 isolated hunter or recreation residence cabins in the area. Several trails are used to access these recreation residences. Bear Creek Trail and part of the old Hawk Inlet Road are being used as trails in this area. Outfitter/guide use was reported at Hawk Inlet, Barlow Cove, and Funter Bay in 1999. Outfitter/guide use at Hawk Inlet included 18 reported groups and a total of 38 clients either sightseeing or brown bear hunting. Reported outfitter/guide use at Barlow Cove consisted of one group of 8 clients hiking. Oufitter/guide use at Funter Bay, which is located immediately west of the area, included 8 groups and a total of 22 clients hiking.

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) | 5,172 | 10% |
| Semi-Primitive Non-Motorized (SPNM) | 37,744 | 73% |
| Semi-Primitive Motorized (SPM) | 4,572 | 9% |
| Roaded Natural (RN) | 4,321 | 8% |
| Roaded Motorized (RM) | 134 | 0% |

The area contains seven inventoried recreation places, which cover 32,797 acres, or 63 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 1 | 5,172 |
| SPNM | 2 | 18,908 |
| SPM | 2 | 4,572 |
| RN | 3 | 4,145 |
| RM | 1 | 1 |

Funter Bay State Park is adjacent to the roadless area and provides trail access from Funter Bay to the roadless area. The Admiralty Island National Monument-Kootznoowoo Wilderness Area is located just south of the roadless area across Hawk Inlet.

**(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 Mansfield Peninsula 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 also given a rating of 20.

**(4) Ecologic and Geologic Values:** The Mansfield Peninsula Roadless Area is located on Admiralty Island. Admiralty Island National Monument-Kootznoowoo Wilderness, located south of the area, encompasses the majority of the island. The Mansfield Peninsula is the northernmost portion of Admiralty Island. Admiralty Island

is entirely unroaded with the exception of the Greens Creek Mine access road and the private road from Funter Bay to the Admiralty-Alaska Mine on the Mansfield Peninsula.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment listed one VCU (VCU 129, Bear Creek) as a primary sportfish producer and another (VCU 127) as a non-producer. The remaining VCUs were identified as secondary salmon producers (ADF&G, 1998).

Streams in this area provide habitat for coho, pink, and chum salmon, as well as steelhead trout. The Anadromous Waters Catalogue and Atlas (ADF&G, 2000) shows 14 fish-bearing streams in this roadless area, the most productive being Bear and Funter Creeks. Bear Creek receives an estimated annual peak escapement of 5,400 pink salmon (ADF&G, 1998) and also provides habitat for coho and chum salmon, as well as steelhead trout. Other Class I streams identified in the Anadromous Waters Catalogue include Cordwood Creek, Barlow Head Creek, Hawk Inlet Head Creek, Jimmy Green Creek, Zinc Creek, Crab Cove Creek, and Coot Cove Creek. These streams provide habitat for coho, pink, and chum salmon.

**(b) Wildlife Resources:** The Mansfield Peninsula supports a large population of brown bear as well as Sitka black-tailed deer. Based on harvest data compiled from 1985 to 1995, VCU 128 (Hawk Inlet) was ranked in the third 25 percent of brown bear harvest areas on the Tongass (ADF&G, 1998). Wolves may also be present (MacDonald and Cook, 1999). Smaller animals include furbearers such as mink, marten, and beaver. Black bears are not present on Admiralty Island, and neither moose nor mountain goats have been reported in 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. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth, and have been sighted in this roadless area. 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 are no glaciers or known unique geologic features.

**(5) Scientific and Educational Values:** No known special features exist in this roadless area. There are no Research Natural Areas in this area. The area is located approximately 10 miles west of Juneau and is, therefore, relatively accessible.

**(6) Scenic Values:** The visual character of this roadless area is Admiralty-Chichagof. For the most part, landforms are generally rounded. This forested peninsula is in a natural state overall. The area appears natural when viewed from Lynn Canal, Saginaw Canal, Funter Bay State Marine Park, Barlow Cove, and the hiking trails within the area. Viewed from Hawk Inlet, the roadless area itself appears unmodified, but the Greens Creek Mine access road that partially borders the area to the south affects the perceived naturalness of the landscape.

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 Lynn Canal, Stephens Passage, and Saginaw Channel (Alaska Marine Highway); Lynn Canal and Stephens Passage (Tourship Routes); and Stephens Passage, Lynn Canal, Barlow Cove, Saginaw Channel, Chatham Strait, Hawk Inlet, and Funter Bay (Small Boat Routes). Use Areas include Funter Bay (State Marine Park); Barlow Island and the west side of Mansfield Peninsula between Point Retreat and the Kittens (Saltwater Use Areas); Barlow Cove, Funter Bay, and the east side of Mansfield Peninsula from Lone Mountain to Young Bay (Dispersed Recreation Areas); Hawk Inlet (Hiking Trail); and Hawk Inlet, Hawk Inlet Cannery, Barlow Cove, and Young Bay (Boat Anchorages).

The majority (64 percent) of this roadless area is found in Variety Class B (possessing landscape diversity that is common for the character type), with 33 percent in Variety Class C (possessing a low degree of landscape diversity). Approximately 3 percent was inventoried as Variety Class A (possessing landscape diversity that is common for the character type).

The vast majority of the area, 99 percent, was inventoried in Existing Visual Condition (EVC) I; these areas appear to be untouched by human activity.

**(7) Social, Cultural, and Historical Values:** The Mansfield Peninsula has had a long history of use. Native use of the area focused on fishing and hunting. Goldschmidt and Haas (1946) identified commercial fish traps along the west shore of the peninsula. They also identified hunting or trapping, a former camp, and a former village in the area. More recent history reveals the importance of mining in the area. Much of the peninsula contains evidence of active or historic mining claims. The remains of an old cannery, built in 1911, are evident on the eastern shore of Hawk Inlet adjacent to this roadless area. The city of Juneau is located approximately 7 miles east of the area.

Approximately 11 isolated hunter or recreation residence cabins are under special use permit in this area, and most are accessed from the eastern shoreline, which is closest to Juneau. There are numerous active mining claims and associated patented land located in this area. Hunting is the primary activity in the area, other than mining. There are no public recreation cabins but there are several trails used to access recreation residences, as well as Bear Creek Trail and part of the Hawk Inlet Trail. Outfitter/guide use was reported at Hawk Inlet, Barlow Cove, and Funter Bay in 1999. Based on harvest data compiled from 1985 to 1995, VCU 128 (Hawk Inlet) was ranked in the third 25 percent of brown bear harvest areas on the Tongass.

Subsistence use occurs in the area. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified two of the VCUs in this area (VCUs 125 at the northern tip and VCU 128 along Hawk Inlet) as subsistence use areas with a high sensitivity to disturbance. None of the VCUs in this area were included among the highest, second, or third group for community use values. (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is generally well defined by shorelines but may be difficult to manage in a wilderness condition because of the numerous existing mining claims in the area. In addition, the Funter Bay State Marine Park extends into the area along an unnamed stream. The area is partially bordered to the south by the Greens Creek Mine access road, which separates it from the Greens Creek Roadless Area. The Greens Creek Roadless Area is allocated to the Semi-remote Recreation, Experimental Forest, and Non-wilderness National Monument designations. The remainder of Admiralty Island forms the Admiralty Island National Monument-Kootznoowoo Wilderness. Activities associated with the Greens Creek Mine could potentially affect the suitability of the Mansfield Peninsula Roadless Area for wilderness.

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

**(1) Recreation, Including Tourism Potential:** Recreation potential for this peninsula is high because of its close proximity to a large population center. Public recreation cabins that can be accessed by saltwater are desired. In 1996, the Alaska Visitors Association (AVA) proposed the following developed recreation for the Mansfield Peninsula: heli-skiing and heli-hiking for 50 persons/day, a day-use recreation facility for 150 persons/day, a day-use wildlife observatory for 30 persons/day, and trails, paths and boardwalks.

The Shoreline Draft EIS identifies several enclave sites for future recreation and outfitter/guide activities on the Mansfield Peninsula (USDA Forest Service, 2002).

**(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 have been identified in this area.

**(4) Wildlife Resources:** No wildlife enhancement projects are planned in this area.

**(5) Timber Resources:** There are approximately 25,794 acres mapped as productive old growth and no acres mapped as second growth due to harvest in the roadless area. Of these acres, 19,375 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUD assigned to this area (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. There are no known epidemic disease occurrences.

**(7) Minerals:** The area generally has a Priority 1 high mineral development potential rating, and there are currently numerous known claims within the area. The Minerals LUD was allocated to a stretch of land extending from Funter Bay to Hawk Inlet. Designating the area wilderness would withdraw the area from mineral entry, subject to valid existing rights.

The roadless area contains 11,134 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 11,074 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. The Minerals LUD is also intended to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when minerals development occurs. In addition, the roadless area contains approximately 45,418 acres of undiscovered locatable mineral resources that are considered to have very low development potential (Brew et al., 1990; USDA Forest Service, 1991).

**(8) Transportation and Utilities:** There are no transportation or utility projects proposed for this area. The area is, however, partially bordered to the south by the Greens Creek Mine access road and an area allocated to the Transportation and Utility System LUD that was identified as a potential transmission line corridor in the 1997 Tongass Land Management Plan Revision. Designating the Mansfield Peninsula Roadless Area Wilderness would not affect these existing and potential transportation and utility corridors.

**(9) Water Availability and Use:** Although there are no developed public recreation cabins or facilities in the area, there are approximately 11 isolated hunter or recreation residence cabins under special use permit that may create some demand for water. 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 this roadless area.

**(11) Land Use Authorizations:** There are 11 isolated hunter cabins or recreation residences under special use permit in this area. There is a right-of-way for an old tractor trail to the Williams Mine departing from the south shore of Funter Bay. This area is private land not technically within the roadless area but it is an extension into it. There is another unauthorized road from Funter Bay to the Admiralty-Alaska Mine. There are two permitted communication sites in the area on top of Mt. Robert Baron. The Coast Guard, Temsco Helicopters, the FAA, and the State of Alaska are currently using these sites. The Forest Service is also planning to install communication equipment at this site.

There are two Special Use Permits for structures at the Point Retreat Lighthouse location. These permits will be closed when the transfer of the lighthouse reserve to private ownership is completed.

**(12) Land Status:** All land within the roadless area is part of the National Forest System. Encumbered lands within the roadless area are located near several islands and private lands along the east shore of the peninsula that are outside the roadless area boundary.

## 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 mining, hunting, and fishing:

**(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 the area as a proposed wilderness addition.

**(c) Public Input During Forest Plan Revisions and Appeals:** More than 100 comments were received about the Mansfield Peninsula during the Forest Plan revision. The majority of people commenting on the Mansfield Peninsula (including several local conservation groups, the National Audubon Society, and the Friends of Mansfield Peninsula) asked that it be assigned to non-logging LUDs, citing its importance for recreation and tourism (proximity to Juneau and being on the ferry route), scenic viewing, and as fish and wildlife habitat (deer and brown bear habitat in particular). Many also felt that the subsistence and recreation values far outweighed the timber values. Commenters noted that protection of the Mansfield Peninsula would "complete protection for all public land on Admiralty Island." Timber industry comments requested that Mansfield Peninsula be developed for timber and roaded recreation, with a road system tying to the Greens Creek Mine access road. Another commenter requested that the Minerals LUD be expanded to cover all areas on the Mansfield Peninsula with active claims. The AVA proposed the following developed recreation for the Mansfield Peninsula: heli-skiing and heli-hiking for 50 persons/day; a day-use recreation facility for 150 persons/day; a day-use wildlife observatory for 30 persons/day; and trails, paths, and boardwalks. 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 and no project-level comments have been identified

**(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 that the Mansfield Peninsula and Greens Creek areas, which are adjacent to the existing Admiralty Island National Monument and Wilderness, be protected through designation as wilderness. These additions would create a contiguous wilderness of just under 1 million acres. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Areas 306 and 307 for permanent protection as wilderness and as an addition to the Admiralty Island National Monument and Wilderness to create a contiguous wilderness of just under 1 million acres.

A Juneau Area Assemblyman recommended Mansfield Peninsula for designation as wilderness and addition to the National Monument.

An individual of the Auk Kwaans asked that their traditional lands on Admiralty, including Mansfield Peninsula and Hawk Inlet, become Wilderness National Monument.

An individual noted that the Mansfield Peninsula is premiere grizzly bear habitat and should be protected. A number of individual commenters identified the Mansfield Peninsula as an area in need of protection.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The area is partially bordered to the south by the Greens Creek Mine access road, which separates it from the Greens Creek Roadless Area (307). The remainder of Admiralty Island forms the Admiralty Island National Monument-Kootznoowoo Wilderness. The islands that comprise the Juneau Islands Roadless Area (309) are located immediately north of the area. The Douglas Island (310) and Juneau Urban (305) Roadless Areas are located on the mainland to the east. The Chilkat-West Lynn Canal Roadless Area is located on the mainland 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) | 10 | 15 |
| Stika (Pop. 8,835) | 75 | 115 |
| Hoonah (Pop. 860) | 20 | 25 |
| Angoon (Pop. 572) | 40 | 45 |

The nearest stop on the Alaska Marine Highway is Auke Bay/Juneau.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Mansfield Peninsula Roadless Area is located on the Mansfield Peninsula, which is the northernmost portion of Admiralty Island. The area is bordered by saltwater to the north, east, west, and part of the south. Lynn Canal/Chatham Strait borders the area to the west. Funter Bay State Marine Park borders the area to the west. Stephens Passage/Saginaw Channel borders the area to the east. The area is bordered to the south by Hawk Inlet and the Greens Creek Mine access road, which separates the area from the adjacent Greens Creek Roadless Area. The area is generally characterized by low-elevation, relatively flat topography with two rugged mountain peaks over 3,100 feet.

Although parts of the area have been modified by mining claims, access routes to these claims, and residential cabins, the natural appearance of the landscape appears dominant. The area has very high natural integrity and high apparent naturalness. The opportunity for solitude is moderate and the opportunity for primitive recreation is high.

Approximately 3 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The area has good historic and cultural values. The historic values are mostly related to the high mineralization of the area. Good anchorages and the proximity of the area to Juneau relate to the relatively high public use of the area.

The roadless area includes about 8,090 acres of high-volume, old-growth forest. Of these acres, 2,111 are mapped as high-volume, coarse-canopy old growth.

The Mansfield Peninsula Roadless Area lies within the Admiralty Island Biogeographic Province and makes up about 5 percent of the province. It is one of two inventoried roadless areas found in the province that collectively make up about 7 percent of the province. Approximately 89 percent of the province is made up of the Kootznoowoo Wilderness, all of which make up the majority of Admiralty National Monument.

The Mansfield Peninsula Roadless Area lies completely within the Kootznoowoo Fjordlands Ecological Section and represents 4 percent of the entire ecological section. This ecological section is well represented by existing wilderness (78 percent) and other existing non-development LUDs (12 percent, including 1 percent in LUD II).

The majority of this roadless area (62 percent) is within the Stephens Passage Glaciomarine Terraces Ecological Subsection. This portion of the roadless area represents 11 percent of the entire ecological subsection, which is well represented in existing wilderness (36 percent), with an additional 5 percent in LUD II and 31 percent in other non-development LUDs. The North Admiralty Complex Ecological Subsection represents 38 percent of the Mansfield Peninsula Roadless Area. This portion of the roadless area represents 6 percent of the entire ecological subsection, which is well represented in existing wilderness (82 percent), with an additional 8 percent protected in other non-development LUDs.

The Mansfield Peninsula Roadless Area was 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.

There is both local and national support for wilderness designation of the area. Others prefer that it be managed in an unroaded condition. Designation would create a wilderness with relatively high use for recreation and minerals and their associated effects. 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 Mansfield Peninsula 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 the Semi-remote Recreation non-development LUD. This area contains 11,134 acres of land identified as a mineral activity tract having a high potential for expanding mineral exploration or development of locatable minerals. In addition, this area contains approximately 45,418 acres of undiscovered locatable mineral resources that are considered to have very low development potential. Recreation, minerals, and special uses programs would continue. The values associated with the natural settings of the roadless area, including the cultural and historic values, are protected by the Forest Plan.

Under Alternatives 6, 7, or 8, the entire roadless 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 potential for other uses and development, including recreation, minerals, and some 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 roadless area, including the cultural and historic values, would be provided long-term protection if designated wilderness.

**Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 306 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | 51,988 | 51,988 | 51,988 |
| 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 | 51,988 | 51,988 | 51,988 | 51,988 | 51,988 | | | |
| Recommended LUD II | | | | | | | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | | | | | | | | |
| TOTAL | 51,988 | 51,988 | 51,988 | 51,988 | 51,988 | 51,988 | 51,988 | 51,988 |
| Suitable Timber Lands | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Greens Creek (307)

**ACRES (NFS):** 19,959

**BIOGEOGRAPHIC PROVINCE:** Admiralty Island

**ECOLOGICAL SECTION:** Kootznoowoo Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 19/22

### I. Overview and Description

**(1) Location and Access:** The Greens Creek Roadless Area is located on the north end of Admiralty Island. The south part of the area consists of Admiralty Island National Monument and the Greens Creek Mine. This Non-wilderness National Monument designation is intended to facilitate the development of mineral resources. Admiralty Island National Monument-Kootznoowoo Wilderness borders the area to the south and east. Young Bay and the Greens Creek Mine access road border the area to the north and separate the area from the Mansfield Peninsula Roadless Area. The Greens Creek Mine access road also borders the area to the west. The City of Juneau is located approximately 15 miles northeast of the area.

The Greens Creek Roadless Area is accessed primarily by private boats and private or chartered aircraft. Juneau has regularly scheduled air service and is a stop in the Alaska Marine Highway. Regular service for employees of Greens Creek Mine has been provided by boat shuttle since 1987. There is no public transportation to the roadless area. The Greens Creek Mine access road borders the area to the west and provides access to the National Monument portion of the area. The Hawk Inlet Trail is located immediately north of the area. Access into the interior is by foot or helicopter. There are no places suitable for landing wheeled airplanes.

**(2) History:** Evidence of prehistoric and historic use of this roadless area is documented. Historically, Tlingit clans used the area as a seasonal subsistence procurement area, and seasonal camps and at least one village site have been noted. Trapper cabins have been found in the area, along with evidence of hunting and fishing camps. The remains of an old, fire-damaged cannery, built in 1911, are evident on the eastern shore of Hawk Inlet adjacent to this roadless area.

Greens Creek Mine is located south of the roadless area. The ore body was discovered in 1975. Exploration drilling began in 1978, initial mine development in 1987, and full production in 1989. The mine closed in 1993 due to low metal prices and reopened in 1996. The mine operation consists of an underground mine that delivers polymetallic (silver, zinc, gold, and lead) ore to a surface mill and concentrator. The operation also includes the Hawk Inlet Camp and concentrate loading facilities.

**(3) Geography and Topography:** The topography of the area ranges from hummocky and blocky landforms to complex terrain dominated by angular profiles and sharply defined crests. Geologic features range from minor peaks to prominent escarpments, craggy peaks, and rock outcrops that tend to dominate the view. Level plains and foothills along Young Bay include pocket clearings of meadows, muskegs, and lakes. There are 3 miles of shoreline on saltwater. About 1,552 acres are inventoried as alpine, 715 acres identified as rock, and no acres of ice or snow features.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Admiralty Island Biogeographic Province. This province represents a modal environment, with relatively gentle topography and moderate rainfall. Winter conditions are moderated by the surrounding marine environment. All forest plant associations except those in the Western red-cedar series, those found around large mainland rivers, and those occurring only on outer coastal areas occur in this province. Forest productivity is high. Fresh and saltwater marshes in the numerous bays and inlets and bog communities are abundant.

Ecological Section/Subsection. The Greens Creek Roadless Area is contained entirely within the Kootznoowoo Fjordlands Ecological Section (M247D). This area is represented by two ecological subsections (see table below). The Stephens Passage Glaciomarine Terraces Ecological Subsection covers a majority, 86 percent, of the roadless area. It contains glaciomarine terraces that grade into mountain slopes. Estuaries and marshes can be found along the coastal areas of the terraces while hemlock-spruce forests dominate the mountain slopes. The North Admiralty Complex Ecological Subsection, covering the remaining 14 percent of the roadless area, consists of a series of narrow ridges and mountains separated by steep U-shaped valleys. The soils are generally shallow and rocky and support vegetation communities such as subalpine barrens, meadows, and brushfields. Landslides and avalanches chutes are common in the forested areas of the lower slopes (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kootznoowoo Fjordlands | North Admiralty Complex | 86% |
| | Stephens Passage Glaciomarine Terraces | 14% |

**(b) Soils:** Soils in the area are largely a result of the movement of glaciers that covered the area 5,000 to 10,000 years ago, and from erosion of glacial deposits since then. Soil types vary considerably depending upon their distance from Hawk Inlet, major streams, and Young Bay. Bedrock underlies the entire area.

**(c) Vegetation:** The vegetation in this area is dominated by spruce/hemlock forest. The understory is composed of shrubs such as blueberry, huckleberry, rusty menziesia, and devil's club. Common groundcover plants are trailing raspberry, bunchberry, foamflower, and twisted stalk. Various cryptogams carpet the forest floor; mosses are dominant but liverworts and lichens are also abundant. There are 1,552 acres of alpine vegetation mapped in this area

There are approximately 15,594 acres mapped as forest land, of which 12,464 acres or 80 percent are mapped as productive old-growth forest. Of the productive old growth, 6,856 acres or 55 percent are mapped as high-volume old-growth forest. The productive old growth includes about 3,628 acres of high-volume, coarse-canopy old growth. There is no second-growth forest resulting from timber harvest activities.

**(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. None of the VCUs in the area were rated as highly valued for sport or commercial fish. VCU 144 (Greens Creek) was rated as a highly valued estuary. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified all three VCUs in the area as secondary salmon producers.

Admiralty Island streams are known to provide habitat for chinook, pink, chum, and silver salmon. Fowler Creek is the major fish-producing stream in the north portion of the area. The Anadromous Waters Catalogue (ADF&G, 2000) indicates that Fowler Creek provides habitat for coho, pink, and chum salmon. Two other unnamed Class I streams in the area provide habitat for coho salmon. Within the National Monument portion of the area, Greens Creek and two unnamed Class I streams provide habitat for coho, pink, and chum salmon and Dolly Varden char. A fishpass was completed on Greens Creek in 1988.

**(e) Wildlife Resources:** Important populations of wildlife in this roadless area include brown bear, Sitka black-tailed deer, wolves, bald eagles, waterfowl/shorebirds, and furbearers, such as mink, marten, river otter, and beaver. Black bears are not present on Admiralty Island, and neither moose nor mountain goats have been reported in this area.

**(5) Management Direction and Current Uses:** The roadless area was allocated to four Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These four LUDs are Minerals, Non-wilderness National Monument, Experimental Forest, and Semi-remote Recreation. The Minerals LUD is a secondary LUD, which overlays the other land uses.

| LUD | Acres |
|---|---|
| Minerals* | 1,456* |
| Non-wilderness National Monument | 8,449 |
| Experimental Forest | 6,544 |
| Semi-remote Recreation | 4,967 |

* Note that acres in the Minerals LUD are included in the Experimental Forest LUD acres.

Approximately 33 percent of the roadless area was allocated to a development LUD (Experimental Forest, Mineral). Approximately 33 percent of the roadless area was allocated to the Experimental Forest LUD. The Young Bay Experimental Forest was originally selected for long-term hydrologic and fisheries monitoring. It also has an extensive terrace underlain by poorly drained marine silt. Timber harvest is consistent with the objectives of Experimental Forest. Approximately 7 percent of the roadless area was allocated to the Minerals LUD overlay.

Approximately 67 percent of the roadless area was allocated to one of two non-development LUDs (Non-wilderness National Monument, Semi-remote Recreation). Most of this roadless area, approximately 42 percent, was allocated to the Non-wilderness National Monument LUD, which is intended to facilitate the development of significant mineral resources located within portions of Admiralty Island National Monument. This LUD is located in the south portion of the roadless area (VCU 144). The Semi-remote Recreation LUD was assigned to approximately 25 percent of the roadless area.

This general area, located approximately 15 miles southwest of Juneau, receives considerable use for hunting, fishing, and other recreational pursuits. Much of this use is, however, concentrated east of the roadless area in the vicinity of Admiralty Creek and Young Lake, and the public recreation cabins located in that area. Use levels in the roadless area are generally lower, especially away from the shoreline. There is some subsistence use in the area. The 1998 Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that subsistence use in the VCUs that comprise this area has a low sensitivity to disturbance. Greens Creek Mining operation located in VCU 144.

**(6) Appearance (Apparent Naturalness):** The area itself displays a natural landscape that can be seen from Young Bay and Stephens Passage. However, several activities and facilities adjacent to the area affect its apparent naturalness when viewed from certain locations. Greens Creek Mine, the Greens Creek access road, Hawk Inlet Camp and concentrate loading facilities, Hawk Inlet trail, and the fire-damaged cannery facility on Hawk Inlet all provide evidence of human alteration in the immediate vicinity of the area. The Greens Creek Roadless Area viewed from Hawk Inlet forms a natural background to the modifications adjacent to the area in the foreground.

**(7) Surroundings (External Influences):** The Greens Creek Roadless Area is located on Admiralty Island. Admiralty Island National Monument-Kootznoowoo Wilderness, which borders the area to the south and east, encompasses the majority of the island. The Mansfield Peninsula Roadless Area is located directly north. Young Bay and the Greens Creek Mine access road border the area to the north. The Greens Creek Mine access road also borders the area to the west. Primary external influences on this roadless area include the Greens Creek Mine and associated activities, which include the access road, a surface mill, concentrator, and the Hawk Inlet Camp and concentrate loading facility. Other influences include aircraft passing over the roadless area, boats in Hawk Inlet and Young Bay, and firearms discharged by hunters.

**(8) Attractions and Features of Special Interest:** The natural features of the area, the scenery, and the opportunity to see and hunt wildlife are all considered attractions. High-quality fishing opportunities in the streams and lakes are also an attraction. A large portion of the area (6,544 acres) is managed under the Experimental Forest LUD to provide long-term opportunities for forest research and demonstration, which may be of interest to some. The area contains six inventoried recreation places, which cover 11,725 acres, or 59 percent of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The main change in the area between 1989 and 2003 involves the east portion of the 1989 area (VCU 133). This area has been added to the Admiralty Island National Monument-Kootznoowoo Wilderness and is no longer part of the Greens Creek Roadless Area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The area itself displays a natural landscape that can be seen from Young Bay and Stephens Passage. Several activities and facilities adjacent to the area affect its apparent naturalness when viewed from certain locations. Greens Creek Mine, the Greens Creek access road, Hawk Inlet Camp and concentrate loading facilities, Hawk Inlet trail, and the fire-damaged cannery facility on Hawk Inlet all provide evidence of human alteration in the immediate vicinity of the area. The Greens Creek Roadless Area viewed from Hawk Inlet forms a natural background to the modifications adjacent to the area in the foreground. However, as noted, the area itself appears natural and is bordered by wilderness on two sides. These factors suggest that the area is appropriate for wilderness. The area has a moderate natural integrity and apparent naturalness. The area on the Youngs Bay side of the area has higher natural integrity and apparent naturalness because it avoids developments and related land encumberances.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** Opportunities for solitude and primitive recreation are relatively high, especially when the adjacent roadless lands are factored in. Along the coastline, opportunities for solitude are relatively lower as a result of aircraft, pleasure boat, cruise ship, and Alaska State ferry traffic. Aircraft regularly pass over the area and vehicles using the adjacent mine access road are visible from some locations. Use away from the shoreline, Greens Creek Mine, and the mine access road is relatively low and the opportunity for solitude in these areas increases dramatically. There was no outfitter/guide use identified within the area in 1999. Outfitter/guide use was, however, reported in the adjacent Hawk Inlet, with 18 reported groups and a total of 38 clients either sightseeing or brown bear hunting.

The area provides primarily a semi-primitive recreation opportunity. 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) | 91 | 0% |
| Semi-Primitive Non-Motorized (SPNM) | 18,349 | 92% |
| Semi-Primitive Motorized (SPM) | 116 | 1% |
| Roaded Natural (RN) | 1,035 | 5% |
| Roaded Modified (RM) | 366 | 2% |

The area contains 6 inventoried recreation places, which cover 11,725 acres, or 59 percent of the roadless area.

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| P | 0 | 0 |
| SPNM | 3 | 10,653 |
| SPM | 1 | 116 |
| RN | 3 | 850 |
| RM | 2 | 105 |

* 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 are located approximately 4 miles to the east in the Admiralty Island National Monument-Kootznoowoo Wilderness 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 Greens Creek 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 19. A separate evaluation was done for the area along Young Bay, including the Flower Creek area, and it was rated 22.

**(4) Ecologic and Geologic Values:** The Greens Creek Roadless Area is located on Admiralty Island. Admiralty Island National Monument-Kootznoowoo Wilderness, which borders the area to the south and east, encompasses the majority of the island. Much of this roadless area is forested with areas of high-volume old growth concentrated along the drainage channels that flow through the area.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment identified all three VCUs in the area as secondary salmon producers and no VCUs as primary sport fish producers (ADF&G, 1998).

Admiralty Island streams are known to provide habitat for chinook, pink, chum, and silver salmon. Fowler Creek is the major fish-producing stream in the north portion of the area. The Anadromous Waters Catalogue (ADF&G, 2000) indicates that Fowler Creek provides habitat for coho, pink, and chum salmon. Two other unnamed Class I streams in the area provide habitat for coho salmon. Within the National Monument portion of the area, two unnamed Class I streams provide habitat for coho, pink, and chum salmon and Dolly Varden char.

**(b) Wildlife Resources:** Important populations of wildlife in this roadless area include brown bear, Sitka black-tailed deer, wolves, bald eagles, waterfowl/shorebirds, and furbearers, such as mink, marten, river otter, and beaver. Black bears are not present on Admiralty Island, and neither moose nor mountain goats have been reported in 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. 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 is a very small area of high vulnerability karst in the southwest section of this roadless area, adjacent to the border of Admiralty Island National Monument. The mapped karst resources encompass 127 acres, or less than one percent of the roadless area. About 30 percent of the karst is mapped as high vulnerability. There are no known glaciers or unique geologic features.

**(5) Scientific and Educational Values:** There are no Research Natural Areas in this roadless area. The east portion of the area (VCU 132) is assigned to the Experimental Forest LUD. The area is located approximately 10 miles southwest of Juneau and is, therefore, reasonably accessible to school-age children.

**(6) Scenic Values:** The visual character type of this roadless area is Admiralty-Chichagof. For the most part, landforms in this unit are generally rounded. Notable exceptions exist, however, especially on the northern portions of Admiralty Island, where mountainous terrain tends to be rugged and snow-covered most of the year. Numerous tidal meadows of varying sizes are found in this area and lower slopes are generally densely forested, but can exhibit a combination of muskeg openings, brush, and scattered tree cover up to approximately 2,500 feet in elevation. The area itself displays a natural landscape that can be seen from Young Bay and Stephens Passage. However, several activities and facilities adjacent to the area affect its apparent naturalness when viewed from certain locations. Hawk Inlet Trail, Greens Creek Mine, the Greens Creek access road, and the fire damaged cannery facility on Hawk Inlet all provide evidence of human alteration in the immediate vicinity of the area. The Greens Creek Roadless Area viewed from Hawk Inlet forms a natural background to the modifications adjacent to the area in the foreground.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area, include Stephens Passage (Alaskan Marine Highway, Small Boat Route, and Tour Ship Route); Hawk Inlet (Small Boat Route); Young Bay (Dispersed Recreation Area); Young Bay, Hawk Inlet, and Hawk Inlet Cannery (Boat Anchorages); and the Hawk Inlet Trail (Hiking Trail).

Eight percent of this roadless area was inventoried in Variety Class A (possessing landscape diversity that is unique for the character type), with 18 percent inventoried in Variety Class B (possessing landscape diversity that is common for the character type). The remaining 31 percent was inventoried in Variety Class C (possessing a low degree of landscape diversity). Approximately 43 percent was not inventoried and is within Admiralty National Monument.

The majority of this area (99 percent) is inventoried in EVC I. These areas appear to be untouched by human activity. Approximately 1 percent is inventoried in EVC III, where changes in the landscape are noticed by the average person but do not attract attention. The natural appearance of the landscape still remains dominant.

**(7) Social, Cultural, and Historical Values:** Evidence of prehistoric and historic use of this roadless area is documented. Historically, Tlingit clans used the area as a seasonal subsistence procurement area, and seasonal camps and at least one village site have been noted. Trapper cabins have been found in the area, along with evidence of hunting and fishing camps. The remains of an old cannery, built in 1911, are evident on the eastern shore of Hawk Inlet adjacent to this roadless area.

Greens Creek Mine, located in the south portion of the area, currently employees about 250 workers. The ore body was discovered in 1975. Exploration drilling began in 1978, initial mine development in 1987, and full production in 1989. The mine closed in 1993 due to low metal prices, and reopened in 1996. The mine operation consists of an underground mine that delivers polymetallic (silver, zinc, gold, and lead) ore to a surface mill and concentrator. The operation also includes the Hawk Inlet Camp and concentrate loading facilities. The City of Juneau is located approximately 10 miles northeast of the area.

Recreational use in the area occurs mainly along the shoreline. Areas east and south of this roadless area are used more intensively for recreational activities. There is some subsistence use in the area. The 1998 Tongass Fish and Wildlife Resource Assessment indicated that subsistence use in the VCUs that comprise this area has a low sensitivity to disturbance. None of the VCUs in this area were included among the highest value community use areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The area is generally well defined by a combination of topographic features and existing roads. The feasibility of management of the north portion of this area in a roadless condition is relatively good. The Greens Creek Mine and access road are, however, located in the south portion of this roadless area. Activities associated with this mining operation, which include a surface mill, concentrator, and the Hawk Inlet Camp and concentrate loading facilities, could potentially affect the wilderness values of this portion of the area. The Greens Creek Roadless Area is bordered to the east and south by

wilderness, which would be extended if the area were designated wilderness. The north portion of the area is bordered to the west by the Greens Creek Mine access road and an area allocated to the Transportation and Utility System LUD that was identified as a potential transmission line corridor in the 1997 Tongass Land Management Plan Revision. This existing road and potential transmission line corridor lead to the Greens Creek Mine and extend into the south part of the roadless area. Adjacent land to the north is allocated to the Semi-remote Recreation LUD.

## 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 have bean identified for this area.

**(4) Wildlife Resources:** No wildlife enhancement projects are planned for this area.

**(5) Timber Resources:** There are approximately 12,464 acres mapped as productive old growth and no acres mapped as second growth due to harvest in the roadless area. Of these acres, 3,435 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. Designating this area wilderness would not affect timber harvest in adjacent areas because these areas are assigned to LUDs that classify forest land as unsuitable 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:** The area has a high mineral development potential. The Greens Creek Mine is located south of the roadless area. A 1996 land exchange provided the Kennecott Greens Creek Mining Company with access and mineral rights to an additional 7,500 acres surrounding the existing mine property and adjacent to this roadless area.

The roadless area contains 2,671 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 1,456 of these acres is 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. The Minerals LUD is also intended to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when minerals development occurs. In addition, the roadless area contains an estimated 18,901 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. The north portion of the area is, however, bordered to the west by the Greens Creek Mine access road and an area allocated to the Transportation and Utility System LUD that was identified as a potential transmission line corridor in the 1997 Tongass Land Management Plan Revision. This existing road and potential transmission line corridor lead to the Greens Creek Mine.

**(9) Water Availability and Use:** Water is used by the Greens Creek Mine, the associated mill, concentrator, and the Hawk Inlet Camp, and concentrate loading facilities. There are no existing or planned hydroelectric or domestic water projects within this area.

**(10) Areas of Scientific Interest:** The east portion of the area (VCU 132) is the Young Bay Experimental Forest. Management as wilderness may restrict the research activities in the area. The mapped karst resources encompass approximately 127 acres or less than one percent of the roadless area.

**(11) Land Use Authorizations:** There are no land use authorizations in this roadless area.

**(12) Land Status:** This roadless area is all National Forest System lands. The State had nominated 841 acres near Young Bay for selection but did not propose selection of this parcel.

## 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 hunting, although camping, boating, fishing, and shellfish gathering are also important.

**(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 Greens Creek Roadless Area. In 2001, HR 2908 identified the north portion of this area (VCUs 131 and 132) as a proposed wilderness addition. The south portion of the area (VCU 144) was partially identified as designated wilderness or monument, with the area surrounding the mine identified as roaded and available for development.

**(c) Public Input During Forest Plan Revisions and Appeals:** This area was not specifically addressed in public input received during the Forest Plan revision and appeal. More than 100 comments were, however, received about the Mansfield Peninsula located immediately north of the Greens Creek Roadless Area. The majority of people commenting on the Mansfield Peninsula asked that it be assigned to non-logging LUDs, citing its importance for recreation and tourism (proximity to Juneau and being on the ferry route), scenic viewing, and as fish and wildlife habitat (deer and brown bear habitat in particular). Some specific comments about the Mansfield Peninsula also included the Greens Creek Roadless Area, noting that protection of the Mansfield Peninsula would "complete protection for all public land on Admiralty Island." Timber industry comments requested that Mansfield Peninsula be developed for timber and roaded recreation, with a road system tying to the Greens Creek Mine access road. Another commenter requested that the Minerals LUD be expanded to cover all areas on the Mansfield Peninsula with active claims.

**(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 island, particularly since it adjoins the Kootznoowoo Wilderness and Mansfield Peninsula Roadless Area (#306).

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Areas 306 and 307 for permanent protection as wilderness and as an addition to the Admiralty Island National Monument and Wilderness to create a contiguous wilderness of just under 1 million acres. SEACC recommended that the Mansfield Peninsula and Greens Creek areas, which are adjacent to the existing Admiralty Island National Monument and Wilderness, be protected through designation as wilderness. They commented that these additions would create a contiguous wilderness of just under 1 million acres.

An individual of the Auk Kwaans asked that their traditional lands on Admiralty, including Mansfield Peninsula and Hawk Inlet, become Wilderness National Monument. Some individuals recommended the area for permanent protection.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Greens Creek Roadless Area is part of a larger unroaded area. This larger area includes Admiralty Island National Monument-Kootznoowoo Wilderness and the Mansfield Peninsula Roadless Area, which is located north across the Greens Creek Mine access road.

The three public recreation cabins on Admiralty Cove and Young Lake in the adjacent wilderness area are extremely popular and generally in use for much of the year. Use away from these developed facilities and the shoreline is much lower because much of the area is not accessible by boat or floatplane.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 15 | 45 |
| Stika (Pop. 8,835) | 75 | 115 |
| Hoonah (Pop. 860 | 25 | 30 |
| Angoon (Pop. 572) | 40 | 45 |

The closest Alaska Marine Highway ferry terminals to this roadless area are Auke Bay/Juneau, Hoonah, and Angoon.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Greens Creek Roadless Area is located on the north end of Admiralty Island. The south part of the area consists of Admiralty Island National Monument and the Greens Creek Mine. Admiralty Island National Monument-Kootznoowoo Wilderness borders the area to the south and east. Young Bay and the Greens Creek Mine access road border the area to the north and separate the area from the Mansfield Peninsula Roadless Area. The Greens Creek Mine access road also borders the area to the west. The topography of the area ranges from hummocky and blocky landforms to complex terrain dominated by angular profiles and sharply defined crests. Geologic features range from minor peaks to prominent escarpments, craggy peaks, and rock outcrops that tend to dominate the view. Level plains and foothills along Young Bay include pocket clearings of meadows, muskegs, and lakes.

The area is mostly unmodified; however, it is influenced by the mining-related development in the nearby area. The area has moderate natural integrity and apparent naturalness. A separate rating for the northern portion of the area was done and indicates that portion would have very high natural integrity and high apparent naturalness. The opportunity for solitude is high and the opportunity for primitive recreation is very high.

Approximately 8 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The east portion of the area was assigned to the Experimental Forest LUD and established for forest research and demonstration. The area has a small zone of karst in the southwest portion. The area has high mineralization and associated activities.

The roadless area includes about 6,856 acres of high-volume, old-growth forest. Of these acres, 3,628 are mapped as high-volume, coarse-canopy old growth.

The Greens Creek Roadless Area lies within the Admiralty Island Biogeographic Province and makes up about 2 percent of the province. It is one of two inventoried roadless areas found in the province that collectively make up about 7 percent of the province. Approximately 89 percent of the province is made up of the Kootznoowoo Wilderness, which makes up the majority of Admiralty National Monument.

The Greens Creek Roadless Area lies completely within the Kootznoowoo Fjordlands Ecological Section and represents 2 percent of the entire ecological section. This ecological section is well represented by existing wilderness (78 percent) and other existing non-development LUDs (12 percent, including 1 percent in LUD II).

The majority of this roadless area (86 percent) is within the North Admiralty Complex Ecological Subsection. This portion of the roadless area represents 5 percent of the entire ecological subsection, which is well represented in existing wilderness (82 percent), with an additional 8 percent protected in other non-development LUDs. The remainder of the Greens Creek Roadless Area is within the Stephens Passage Glaciomarine Terraces Ecological Subsection (14 percent). This portion of the roadless area represents 1 percent of the entire ecological subsection, which is well represented in existing wilderness (36 percent), with an additional 5 percent in LUD II and 31 percent in other non-development LUDs.

The Greens Creek 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 70$^{th}$ 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 northern portion of the area, which resulted in a score of 22.

There is both local and national support for wilderness designation for the north portion of the area, and support for managing the area in an unroaded condition. Designation would create a wilderness that would include the Experimental Forest and areas in the vicinity of the Greens Creek mining property and ongoing operations. Mineralized areas within the roadless area would be included as well. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low for the entire roadless area, and the relative contribution of the northern portion would be moderate.

## V. Environmental Consequences

The Greens Creek Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, or 5 is implemented. Approximately 67 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development, consistent with the objectives of the Experimental Forest, could occur on the remaining 33 percent. No land is identified as suitable for timber production. This roadless area contains 2,671 acres of land identified as a mineral activity tract having a high potential for expanding mineral exploration or development of locatable minerals. In addition, this area contains an estimated 18,901 acres of undiscovered locatable mineral resources that are considered to have very low potential for development. Use of the area for an experimental forest, recreation, minerals activities, and special uses programs would continue. The values associated with the natural settings of the roadless area could be affected in the Experimental Forest portion of the area.

Under Alternatives 6 or 7, an 11,603-acre portion of the area, including the experimental forest, would be converted to Recommended Wilderness LUD. The potential for uses and development, including experimental forest, recreation, minerals and some special uses, could be restricted. There would be no area suitable for timber production as in Alternative 1. 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 Young Bay portion of the roadless area would be provided long-term protection if designated wilderness.

Under Alternative 8, the entire area would be converted to Recommended Wilderness LUD. The potential for uses and development, including experimental forest, recreation, minerals and some 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 roadless area would be provided long-term protection if designated wilderness.

| Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 307 (in acres) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Land Use Designation** | **Alt 1** | **Alt 2** | **Alt 3** | **Alt 4** | **Alt 5** | **Alt 6** | **Alt 7** | **Alt 8** |
| **Recommended Wilderness** | | | | | | 11,603 | 11,603 | 19,959 |
| **Wilderness** | | | | | | | | |
| **Recommended Wilderness Nat. Mon.** | | | | | | | | |
| **Wilderness National Monument** | | | | | | | | |
| **Nonwilderness National Monument** | 8,449 | 8,449 | 8,449 | 8,449 | 8,449 | 8,356 | 8,356 | |
| **Research Natural Area** | | | | | | | | |
| **Special Interest Area** | | | | | | | | |
| **Remote Recreation** | | | | | | | | |
| **Enacted Municipal Watershed** | | | | | | | | |
| **Old-growth Habitat** | | | | | | | | |
| **Semi-remote Recreation** | 4,967 | 4,967 | 4,967 | 4,967 | 4,967 | | | |
| **Recommended LUD II** | | | | | | | | |
| **LUD II** | | | | | | | | |
| **Wild, Scenic, Recreational River** | | | | | | | | |
| **Experimental Forest** | 6,544 | 6,544 | 6,544 | 6,544 | 6,544 | | | |
| **Scenic Viewshed** | | | | | | | | |
| **Modified Landscape** | | | | | | | | |
| **Timber Production** | | | | | | | | |
| **TOTAL** | **19,959** | **19,959** | **19,959** | **19,959** | **19,959** | **19,959** | **19,959** | **19,959** |
| **Suitable Timber Lands** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Windham-Port Houghton (308)

**ACRES (NFS):** 161,922

**BIOGEOGRAPHIC PROVINCE:** Northern Coast Range

**ECOLOGICAL SECTION:** Inside Passage Fjordlands and Boundary Ranges

**2003 WILDERNESS ATTRIBUTE RATING:** 25 (25, 25)

### I. Overview and Description

**(1) Location and Access:** The Windham-Port Houghton Roadless Area is located directly south of the Chuck River and Tracy Arm-Fords Terror Wildernesses and is bordered on the west by Stephens Passage. The Fanshaw and Spires Roadless Areas lie to the south. This roadless area is approximately 35 air miles east of Angoon and 50 air miles south of Juneau. Both cities are served by the Alaska Marine Highway, and Juneau has daily jet service. There are non-National Forest System lands along Hobart Bay and Port Houghton, near the center of the roadless area. These private lands have an extensive road network. The roadless area can be accessed by floatplane and boat at several points along the shore. There are no places suitable for landing wheeled airplanes. Access to the interior is by foot or helicopter.

**(2) History:** There is evidence, including petroglyphs, that the area has been used since prehistoric times, probably by Tlingit people. In more recent history, evidence of small homesteads, logging, mining activities, and fox farms can still be found dating back to the 1800s and early 1900s. A large area surrounding Hobart Bay and a smaller portion on Port Houghton, near the center of the roadless area, has been conveyed to the Goldbelt Village Corporation. Most of this area has been actively managed for timber resources, dividing portions of the roadless area in two.

**(3) Geography and Topography:** The topography of the area is typical of glaciated valleys in Southeast Alaska. The area contains U-shaped valleys with steep, glacially scoured sidewalls and mountainous ridgetops. Elevations range from sea level to over 5,000 feet. There are 133 miles of shoreline on saltwater, and 68 islands and islets (3 of which are greater than 10 acres) totaling 252 acres. Rock comprises 8,599 acres of this area and alpine 1,084 acres. Ice and snow total 75 acres. Freshwater lakes cover 215 acres of this area.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. This roadless area is classified as being in the Northern Coast Range Biogeographic Province. This province is generally characterized by rugged, heavily glaciated terrain with extensive alpine environments. The province has little maritime influence. Yellow-cedar plant associations occur in this province.

Ecological Section/Subsection. The Windham-Port Houghton Roadless Area is contained almost entirely within the Inside Passage Fjordlands Ecological Section (M247E), with a small portion in the Boundary Ranges Ecological Subsection (M246B). These areas are represented by three ecological subsections (see table below). The Holkam Bay Complex Ecological Subsection covers the majority of the roadless area. It has rounded mountains with steep sidewalls. The mostly mineral soils reflect the sedimentary strata and plutonic intrusions underlying most of this area, and glacial till is generally absent. Alpine vegetation communities dominate about a quarter of this subsection, while the lower slopes support productive hemlock-spruce forests. The poorly drained organic soils of the lowlands support substantial forested wetlands. The Cape Fanshaw Complex, approximately 9 percent of the roadless area, is very similar to the Holkam Bay Complex, but glacial till is present. The northernmost extent of sword fern and western redcedar occurs in this subsection (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Inside Passage Fjordlands | Holkam Bay complex | 91% |
| | Cape Fanshaw Complex | 9% |
| Boundary Ranges | Boundary Ranges Icefields | <1% |

**(b) Soils:** Soils on the sideslopes are predominantly shallow residuals, which have developed from metasediments. Rooting strength is an important factor in slope stability, because of its anchoring effect on the shallow soil mantle. Valley bottom soils on floodplains and terraces are composed primarily of alluvial silts, sands, and gravel.

**(c) Vegetation:** Most forest timber stands are composed primarily of western hemlock and Sitka spruce. Alaska-cedar is found scattered throughout the spruce/hemlock stands, and lodgepole pine can be found on poorly drained sites. Red alder and Sitka alder line some streams and shorelines, and dominate landslides and other areas where soil disturbance has occurred. There are 512 acres of muskeg mapped in this area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. There are 1,084 acres of alpine vegetation mapped within the roadless area.

There are approximately 137,646 acres mapped as forest land of which 107,199 acres or 78 percent are mapped as productive old-growth forest. Of the productive old growth, 44,842 acres or 42 percent are mapped as high-volume old-growth forest. The productive old growth includes about 10,439 acres of high-volume, coarse-canopy old growth. There are 127 acres of second-growth forest where timber harvest has occurred in the past. The second growth is the result of beach logging about 30 to 40 years ago. Approximately 109 acres are in VCU 690 at Dry Bay and 19 acres are in VCU 700 on the north shore of the mouth of Windham Bay.

**(d) Fish Resources:** Streams in this area support pink, coho, chum, and sockeye salmon; cutthroat and steelhead trout; and Dolly Varden Char. The major fish producers are Thistle Ledge Creek, Point League Creek, Libby Creek, Nancy Creek, Glen Creek, Rusty River, Sandborn River, and Negro Creek.

**(e) Wildlife Resources:** The area supports a rich wildlife population. Larger mammal species include both black and brown bear as well as moose, Sitka black-tailed deer, wolves, and, at the higher elevations, mountain goats. Smaller animals include furbearers such as mink, marten, and beaver. Bald eagles, marbled murrelets, trumpeter swans, and goshawks are also found here. There are numerous harbor seal haul-out sites along the shoreline.

**(5) Management Direction and Current Uses:** This area was allocated to four Land Use Designations (LUDs), under the 1997 Tongass Land and Resource Management Plan. These four LUDs are Timber Production, Old-growth Habitat, Scenic Viewshed, and Semi-remote Recreation.

| LUD | Acres |
|---|---|
| Timber Production | 103,879 |
| Scenic Viewshed | 25,616 |
| Old-growth Habitat | 32,210 |
| Semi-remote Recreation | 218 |

Approximately 80 percent of the roadless area was allocated to land use designations (LUDs) that allow development (Timber Production, Scenic Viewshed). Most of the roadless area, approximately 64 percent, was allocated to the Timber Production LUD. Approximately 16 percent of the roadless area, near Sand Bay, Dry Bay, Sunset Cove, Port Houghton, North Arm, and Salt Chuck, was allocated to Scenic Viewshed LUD.

Approximately 20 percent of the roadless area was allocated to a non-development LUD(Old-growth Habitat, Semi-remote Recreation). The Old-growth Habitat LUD was assigned to approximately 20 percent of the roadless area.

Less than 1 percent of the roadless area was allocated to the Semi-remote Recreation LUD. This LUD is located primarily on Sunset Island, Walter Island, and smaller islands near the roadless area.

There are no trails in this roadless area. Most use is focused along shorelines and at several upland mining claims. Windham Bay is a popular bay for fishing, crabbing, black bear hunting, and other recreational and commercial activities, and the bay provides access routes to some of the mining claims to the east. Negro Creek has a fish ladder improvement. Recreation and subsistence use is low. Only one deer was reported harvested in the Wildlife Analysis Area (2926) that contains this roadless area in 2000. The area near Dry Bay and Port Houghton are used for black bear hunting but harvest levels have not been high. The Forest Service has an uncompleted administrative cabin at Little Lagoon on the south side of Port Houghton.

Timber sale planning is under way in this roadless area. Future potential projects include Hobart and North Windham, which are scheduled to sell about 65 MMBF of timber in 2004 through 2009.

**(6) Appearance (Apparent Naturalness):** Most of the area appears unmodified except for the occasional remains of old fox farms, cabins, or evidence of mining claims. The appearance of portions of the roadless area and the Chuck River Wilderness have been affected by the developments on private lands in Hobart Bay.

**(7) Surroundings (External Influences):** This roadless area is adjacent to Stephens Passage. The Alaska Marine Highway ferries and tour boats sail Stephens Passage on a regular basis, but because of the vastness of the area, usually appear only as small ships in the distance. Windham Bay is a popular bay for fishing, crabbing, and other recreational and commercial activities, and the bay provides access routes to some of the mining claims to the east. Floatplanes and boats may be seen in Windham Bay more frequently than in the other bays of this roadless area. The adjacent wilderness is steep and remote and access is difficult. Port Houghton is a large bay with a public recreation cabin, but no other permanent facilities. Commercial fishing and crabbing boats use the bay. The area is large enough to minimize the external influences of these activities. There has been extensive development on private lands along Hobart Bay and the northwest shores of Port Houghton, which is owned by the Goldbelt Village Corporation. This has affected the appearance of a large portion of the roadless area, as well as the adjacent Chuck River Wilderness. Patented mining claims are also located adjacent to the roadless area boundary.

**(8) Attractions and Features of Special Interest:** The area is immediately adjacent to saltwater bays that are valued for fishing, crabbing, and other recreational and commercial activities. The salt chuck at the head of Port Houghton is the only salt chuck on the mainland. The area contains 10 inventoried recreation places, which cover 85,165 acres, or 53 percent of the roadless area. There are no trails in the area and one public recreation cabin, but no other developments.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** Approximately 72,500 acres in the northeast portion of the roadless area was designated as the Chuck River Wilderness in 1990. This area, though still unroaded, is no longer part of the Windham-Port Houghton Roadless Area.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** A large area surrounding Hobart Bay and a small portion of Port Houghton near the center of the roadless area are privately owned. Most of this area has been developed, dividing portions of the roadless area into two parts, and affecting the apparent naturalness and integrity portions of the roadless area. The rest of the area is unmodified except for the remains of fox farms, cabins, and mining claims mentioned above, and has high natural integrity and apparent naturalness. Generally, long-term ecological processes operate intact throughout the area, making it suitable for wilderness classification.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There are vast opportunities for solitude and primitive recreation within a large portion of the area, and especially when adjacent roadless lands are factored in. The Alaska Marine Highway has only a slight effect on one's feelings of solitude, and there is no regular air traffic into or over the area. The area directly adjacent to developed private land in Hobart Bay is most affected by external influences. Access is primarily gained from commercial fishing boats, private recreational boats, or floatplanes.

Accessing the roadless area by boat from the community of Petersburg requires a 4- to 6-hour crossing on exposed waters. There are no trails accessing the roadless area. This roadless area is very large and difficult to cross. The presence of both brown and black bears also presents a degree of challenge and a need for woods skills and experience.

The area primarily provides 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) | 79,304 | 49% |
| Semi-Primitive Non-Motorized (SPNM) | 63,797 | 39% |
| Semi-Primitive Motorized (SPM) | 9,662 | 6% |
| Roaded Motorized (RM) | 9,046 | 6% |

The area contains 10 inventoried recreation places, which cover 85,165 acres, or 53 percent of the roadless area.

| ROS Class | # of Rec. Places | Total Acres |
|---|---|---|
| P | 3 | 41,039 |
| SPNM | 4 | 34,518 |
| SPM | 3 | 9,608 |
| RM | 0 | 0 |

The Chuck River Wilderness Area and Tracy Arm-Fords Terror Wilderness Area border this roadless area to the east.

There is one public recreation cabin in the area at Little Lagoon on the south shore of Port Houghton. There are no trails 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 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 Windham-Port Houghton Roadless Area was given a rating of 23 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 25. This rating reflects the large size of the area, coupled with adjacent roadless lands, and its ability to absorb effects of developments in Hobart Bay and Port Houghton. Separate ratings were done for the area north of Hobart Bay and south of Hobart Bay. Both areas received scores of 25, similar to the overall rating for the roadless area.

**(4) Ecologic and Geologic Values:** The roadless area is part of a very large unroaded area extending along the mainland from the Misty Fiords National Monument Wilderness in the south to Glacier Bay National Park in the north. This extensive unroaded area borders unroaded areas to the north and east in Canada.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment listed VCUs 75, 79, and 84, around Hobart Bay and at the end of Port Houghton, as primary salmon producers. None of the VCUs were listed as primary sport fish producers (ADF&G, 1998).

Streams in this area support pink, coho, chum and sockeye salmon; cutthroat and steelhead trout; and Dolly Varden char. The major fish producers are Thistle Ledge Creek, Point League Creek, Libby Creek, Nancy

Creek, Glen Creek, Rusty River, Sandborn River, and Negro Creek. Nancy Creek has an estimated annual peak escapement of 70,400 pink salmon, while Glen Creek has an estimated 36,200 pink salmon. Large runs of sockeye salmon have been reported for the Rusty River. The Lower Sandborn River is second only to the Rusty River in terms of productivity, with an estimated annual peak escapement of 80,300 pink and 26,000 chum salmon. Coho salmon, steelhead and Dolly Varden are also produced in the Lower Sandborn River. Coho and pink salmon, cutthroat trout, and Dolly Varden char were observed in Negro Creek. Peak escapement surveys indicate as many as 40,000 pink and 2,800 chum salmon. A fishpass was completed on Negro Creek in 1986, which has been determined unsuccessful. The ADF&G Anadromous Stream Catalogue (1998) lists Haystack Creek, Placer Creek, and Walters Island Creek among other streams used by pink and chum salmon.

**(b) Wildlife Resources:** The area supports a rich wildlife population. Larger mammal species include both black and brown bear as well as moose. Based on information collected from 1985 to 1994, VCU 75, partially in this roadless area and surrounding Hobart Bay, is listed in the top 25 percent of VCUs for brown bear harvest (ADF&G, 1998). Sitka black-tailed deer, wolves, and at the higher elevations, mountain goats also inhabitat the area. Smaller animals include furbearers such as river otter, mink, marten, and beaver. Black bears are most plentiful near the Sandborn Canal. Information from the Port Houghton EIS indicates that bald eagles and their nest sites are observed frequently along the shoreline (USDA Forest Service, 1998). Since 1979, the USFWS has observed 186 nest sites along the shoreline of Port Houghton and Sandborn Canal. Marbled murrelets inhabit the area, but no nest sites have been identified. Harbor seal haul-out sites occur on an island in the salt chuck, at the mouth of Sandborn Canal, on Rabbit and Walter Islands, and at the mouth of Port Houghton at Robert and Foot Islands.

**(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. As many as 200 Steller sea lions have been reported in the Port Houghton Salt Chuck during the summer months. 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 such as Sandborn Canal. 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. Goshawk nests were noted throughout the southern portion of the roadless area in the Port Houghton Draft EIS. 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 are no major glaciers in this area. The salt chuck at the head of Port Houghton is a unique geologic feature.

**(5) Scientific and Educational Values:** There are opportunities to observe and study fish and wildlife throughout the area. Historic and prehistoric sites are special features within this area, including petroglyphs in Windham Bay. Within Port Houghton, the salt chuck at the head of the bay is an interesting feature.

**(6) Scenic Values:** There are several inholdings and mining claims near Windham Bay, as well as private cabins, that are occasionally visible. Large areas surrounding Hobart Bay have been developed by the private landowner. These developments are visible and affect the apparent naturalness of the general area. These developments extend around and in to the north side of the entrance to Port Houghton, so viewsheds from Stephens Passage into Hobart bay appear highly modified on the developed area of the north shore. Viewing this area from Port Houghton to the south, Dry Bay and Sandy Bay, the landscape appears natural.

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 and a tour ship and small boat route) and Windham Bay, Port Houghton, North Arm, Sandborn Canal, and Hobart Bay, which are small boat routes and boat anchorages.

Four percent of the roadless area is considered Variety Class A (possessing landscape diversity that is unique for the character type) and 59 percent is in Variety Class B (possessing landscape diversity that is common for the character type). Approximately 37 percent is in Variety Class C (possessing a low degree of landscape diversity). The vast majority of this area, approximately 99 percent, is in Existing Visual Condition (EVC) Type I, where only ecological change has occurred.

**(7) Social, Cultural, and Historical Values:** There is evidence, including petroglyphs, that this area has been used since prehistoric times, probably by Tlingit people. In more recent history, evidence of small homesteads, logging, mining activities, and fox farms can still be found dating back to the 1800s and early 1900s. VCU 82, at the mouth of Port Houghton, is among the VCUs with highest sensitivity to disturbance of subsistence use areas. VCU 84, on the southern side of Port Houghton, was listed among the VCUs with the highest community use values. VCU 79, at the end of Port Houthon, was listed in the second most important group of VCUs (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The Windham-Port Houghton Roadless Area is contiguous with Chuck River Wilderness to the northeast and with the Tracy Arm-Fords Terror Wilderness to the east, and with the Fanshaw (201) and Spires (202) Roadless Areas to the south. The western boundary is primarily Stephens Passage, except for the area adjacent to Hobart Bay and the northwest shore of Port Houghton. The boundary between private land and the roadless area is not defined by natural features. Activities on private lands could affect a user's experience in that portion of the roadless area. These private lands divide the roadless area into two parts. In addition, the northern half is divided into two separate parts by Windham Bay. The northern-most portion has well-defined boundaries, has a high degree of natural integrity, and could easily be added to the Chuck River Wilderness, which lies on its eastern border. Alternately, the northern portion of the roadless area south of Windham Bay could be divided at the ridge north of Libby Creek and everything north of that natural boundary could be added to the Chuck River Wilderness. Topographic features could also be used to define a portion of the southern segment of the roadless area and that area could be added to the Tracy Arm-Fords Terror Wilderness, which lies to the east. Much public interest has been expressed regarding the Port Houghton area. Adding the Port Houghton and Sanborn Canal watersheds to the Tracy Arms-Fords Terror Wilderness or managing them in a non-development LUD would maintain this area of high resource values and public interest. This area could also be managed with the Spires Roadless Area to the south. The remaining area, which is affected by development on the private land, could be managed separately, either in a roadless condition or under existing LUDs.

## 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. Petersburg and Juneau are hubs for this increase in tourism and are expected to continue to be. The distance of this roadless area from Petersburg and Juneau and the difficulty in reaching the area is likely to limit tourist interest in the roadless area. There is potential for developing recreation facilities such as public recreation cabins and trails in the area, but because of the distance from any population center, use may be low. Recreation potential focuses primarily on primitive and semi-primitive opportunities.

In 1996, the Alaska Visitors Association (AVA) proposed the following recreation developments in the Windham-Port Houghton Roadless Area: a leased proprietary camp for 15 persons, a day-use wildlife observatory for 30 persons, and an overnight wildlife observatory for 30 persons in the Port Houghton area; a back-country recreation lodge for 50 persons and a leased proprietary camp for 15 persons in Windham Bay; and a leased proprietary camp with a 15 person capacity in Sands Bay.

**(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 for the roadless area.

**(4) Wildlife Resources:** No wildlife habitat enhancement projects are planned for this roadless area.

**(5) Timber Resources:** There are approximately 107,199 acres inventoried as productive old-growth forest in the roadless area. There are 127 acres of second-growth forest. Of these acres, 66,819 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), 20,546 acres or 13 percent of this roadless area are estimated to be suitable for timber production. Approximately 8,136 of the suitable acres are mapped as high-volume old growth; of these acres, 1,758 are mapped as high-volume, coarse-canopy old growth.

A Position Statement (Gate 1) for the proposed Hobart Bay Timber Sale was completed in May 2001. Based on this report, the potential for developing a viable timber sale in the roadless area is good. The 10-year action plan schedules 35 MMBF of sales under the Hobart Project in 2004 and 2007. In addition, the North Windham Project is also in the 10-year plan. The project includes 30 MMBF of timber sales in 2008 and 2009.

**(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:** Portions of this area, especially in the Windham Bay area, are considered to have high mineral development potential, priority three. There are current claims near Endicott Arm and Windham Bay. Former mining activities are obvious in the salt chuck area.

The roadless area contains 1,567 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, the roadless area contains an estimated 86,237 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:** There are no transportation or utility corridors proposed in the roadless area.

**(9) Water Availability and Use:** The existing public recreation cabin creates some domestic water demand. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

**(10) Areas of Scientific Interest:**. The salt chuck at the head of the Port Houghton is a rare mainland salt chuck.

**(11) Land Use Authorizations:** A land exchange was completed in 1988 with Goldbelt, Inc. in which the National Forest System received parcels in Port Houghton in exchange for land near Libby Creek. Sealaska Corporation retains subsurface rights on portions of the Port Houghton tract.

**(12) Land Status:** All land within the roadless area is part of the National Forest System.

## 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 fishing (both commercial and sport), hunting, beachcombing, mining, and crabbing. Much of the use in the Port Houghton area originates from Petersburg. Residents of Hobart Bay logging camp also use 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 included the Windham-Port Houghton Roadless Area. The northeastern portion of the roadless area (approximately 72,500 acres) was designated as the Chuck River Wilderness. In 2001, HR 2908 proposed that that the northern portion be designated as the Chuck River Wilderness and that the remaining area be designated as part of the Port Houghton-Farragut Bay Wilderness.

**(c) Public Input During Forest Plan Revisions and Appeals:** The Alaska Rainforest Campaign and the Southeast Alaska Conservation Council (SEACC) commented that the Port Houghton and Sanborn

Canal area deserved special protection to preserve the integrity of the area. The SEACC sent out an alert that generated approximately 100 letters. Most mentioned that the Port Houghton/Sanborn Canal area should be LUD II. Several other individuals recommended the area be designated wilderness or LUD II. An article in Greenpeace Magazine resulted in over 100 letters. Most writers opposed managing the area for timber. Several people that attended public hearings also recommended against roading and harvesting the area. In 1996, the Alaska Visitors Association (AVA) proposed the following recreation developments in the Windham-Port Houghton Roadless Area: a leased proprietary camp for 15 persons, a day-use wildlife observatory for 30 persons, and an overnight wildlife observatory for 30 persons in the Port Houghton area; a back-country recreation lodge for 50 persons and a leased proprietary camp for 15 persons in Windham Bay; and a leased proprietary camp with a 15-person capacity in Sands Bay. Over 100 individuals cited the need to protect the area for tourism and recreation, especially the Sandborn Canal and the salt chuck at the head of the North Arm of Port Houghton. Others felt that the area should be managed for timber production.

**(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review:** SEACC recommended this area for protection. Other 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 were received on the Port Houghton/Cape Fanshaw Timber Sale Project DEIS. Seventy-four individuals, organizations, and agencies submitted written comments; most were against the project. A Revised DEIS was issued in 1998. The Forest Service has not prepared a Final EIS. Most comments were concerned about the size of the harvest and other details and did not comment directly on the roadless issue. A guide service, Wilderness Swift Charters, commented that all the action alternatives posed a "dire threat to the stability of our business." Other guide services also expressed their opposition to timber management in the area. Many commenters felt that timber harvest would harm fishery resources in the area. Timber industry comments supported development. One commenter noted that subsistence use was practically nonexistent.

**(f) Public Input Expressed During Supplemental EIS Process:** The U.S. Department of the Interior identified this roadless area as having outstanding fish and wildlife values. They consider it to have the most important habitat on the central mainland.

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 Port Houghton (the southern portion of RA# 308). 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.

The Alaska Department of Fish and Game recommended permanent roadless status for Port Houghton in their comments on the Draft SEIS. They rated the Windham-Port Houghton roadless area as the seventh highest priority for protection in the Stikine Area. 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 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. However, they encouraged the Forest Service not to log or build logging roads in watersheds that are primary salmon-producing watersheds or otherwise community use areas important to Petersburg residents, including Port Houghton.

The city of Kupreanof recommends the entire Port Houghton drainage, Cape Fanshaw, Farrugut Bay, and the shoreline from Farrugut Bay to Thomas Bay for designation as wilderness.

The Organized Village of Kake passed a resolution requesting that "customary and traditional areas such as … Cape Fanshaw/Farragut Bay (VCUs 860-900), Port Houghton (VCUs 790-840)… be recommended for long-term protection."

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 201, 202, 203, and 308 as a contiguous complex of roadless areas that should be considered one roadless area and recommended it for permanent protection as wilderness. SEACC identified the Windham-Port Houghton roadless area as part of the Port Houghton/Cape Fanshaw complex (RAs 201, 202, and 308), which should be considered one contiguous roadless area and recommended for permanent protection as wilderness. They commented that if this complex were designated, it would create a contiguous wilderness along the central mainland coast of nearly 2 million acres, making it the second largest Forest Service Wilderness in the nation.

Audubon Alaska recommended that Port Houghton be protected from logging and road building.

Many individuals identified Port Houghton as an area that needed protection and some included Sandborn Canal. One individual noted that the area north of Wyndham Bay should be protected to preserve a large segment of forest in this area (instead of mostly icefields and barren rock in Tracy Arm-Fords Terror).

**(2) Nearby Roadless and Wilderness Areas and Uses:** The roadless area is part of a very large unroaded area extending along the mainland from the Misty Fiords National Monument Wilderness in the south to Glacier Bay National Park in the north. This extensive roadless area borders unroaded areas to the north and east in Canada. The Tracy Arm-Fords Terror Wilderness is adjacent to this roadless area along the eastern boundary and the Chuck River Wilderness is adjacent to the northeast boundary. To the south lie the Fanshaw (201) and Spires (202) Roadless Areas. Use levels for these four areas are low to moderate.

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

| Community | Air Miles | Water Miles |
|---|---|---|
| Juneau (Pop. 30,711) | 50 | 50 |
| Stika (Pop. 8,835) | 70 | 150 |
| Hoonah (Pop. 860 | 70 | 115 |
| Angoon (Pop. 572) | 35 | 80 |

The closest stop on the Alaska Marine Highway is Petersburg.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Windham-Port Houghton Roadless Area is located directly southeast of the Chuck River and Tracy Arm-Fords Terror Wildernesses and is bordered on the west by Stephens Passage. The Fanshaw and Spires Roadless Areas lie to the south. There are developed private lands along Hobart Bay and Port Houghton, near the center of the roadless area. The topography of the area contains U-shaped valleys with steep, glacially scoured sidewalls and mountainous ridgetops. Elevations range from sea level to over 5,000 feet.

The area is mostly unmodified; however, it is somewhat influenced by the developments on adjacent private lands. The natural integrity and apparent naturalness is rated as very high. The areas north and south of Hobart Bay were each rated separately, and both areas had very high natural integrity and apparent naturalness. The opportunity for solitude is very high, and the opportunity for primitive recreation is outstanding.

Approximately 4 percent of the landscape is considered distinctive for the character type from a scenery standpoint. The salt chuck at the head of Port Houghton is a unique geologic feature.

The roadless area includes about 44,842 acres of high-volume, old-growth forest. Of these acres, 10,439 are mapped as high-volume, coarse-canopy old growth. It ranks as the sixth highest Tongass roadless area in terms of acres of high-volume, coarse-canopy old growth; the majority of this old growth is contained within non-development LUDs.

The Windham-Port Houghton Roadless Area is classified as being in the Northern Coast Range Biogeographic Province and makes up about 15 percent of the province. It is one of six inventoried roadless areas found in the province that collectively make up about 66 percent of the province. Portions of the Chuck River and Tracy Arm-Fords Terror Wildernesses are within the province and make up about 23 percent of the province.

The Windham-Port Houghton Roadless Area lies within two ecological sections; it represents 6 percent of the Inside Passage Fjordlands Ecological Section and less than 1 percent of the Boundary Ranges Ecological Section. Both of these ecological sections are well represented by existing wilderness (20 and 33 percent, respectively) and by other existing non-development LUDs (30 and 61 percent respectively, including 2 and 1 percent, respectively, of LUD II).

The majority of this roadless area (91 percent) is within the Holkam Bay Complex Ecological Subsection. This portion of the roadless area represents 29 percent of the entire ecological subsection, which is well represented in existing wilderness (32 percent) and other non-development LUDs (28 percent). The Cape Fanshaw Complex Ecological Subsection represents 9 percent of the Windham-Port Houghton roadless area. This portion of the roadless area represents 21 percent of the entire ecological subsection, which is poorly represented in existing wilderness (0.1 percent) and well represented in other non-development LUDs (29 percent). A very small portion of the Boundary Ranges Icefields Ecological Subsection (0.5 percent) is within this roadless area. This portion of the roadless area represents less than 0.1 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 Windham-Port Houghton 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. Both the areas north and south of Hobart Bay were rated separately, and each rated 25.

There is strong local support for managing the area in a roadless condition, and there is both local and national support for wilderness designation for the roadless area. Designation would create a wilderness that would be a relatively large addition to the combined designated wildernesses adjacent to the area. Designation of the area as wilderness would add Congressional protection to approximately 21 percent of the Cape Fanshaw Complex Ecological Subsection that is poorly represented in wilderness or LUD II. The area abuts large parcels of private lands in the Hobart Bay and Port Houghton areas that are managed primarily for timber production. Overall, the factors identified here indicate that the relative contribution of at least portions of this area to the National Wilderness Preservation System would be relatively high.

## V. Environmental Consequences

The Windham-Port Houghton Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, or 4 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. The land in the development LUDs provides an estimated 20,546 acres that are suitable for timber production (50 percent of the suitable land on the Juneau Ranger District). Approximately 1,758 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains 1,567 acres of land identified as a mineral activity tract having a low potential for experiencing mineral exploration and development of locatable minerals. In addition, the roadless area contains an estimated 86,237 acres of undiscovered locatable mineral resources that are considered to have low potential for development. Timber sale, recreation, minerals, and special uses programs would continue. The values associated with natural settings of the roadless area could be affected by developments allowed by the Forest Plan. The geologic and most of the scenic values of the roadless area are protected by the Forest Plan.

Under Alternative 5, a 123,602-acre portion of the area in Old-growth Habitat, Semi-remote Recreation, Scenic Viewshed, and Timber Production LUDs would be converted to Recommended Wilderness LUD. No timber harvest would be allowed and the potential for other uses and development, including recreation, minerals and some special uses, would be restricted within the Recommended Wilderness LUD area. Lands suitable for timber production would be reduced to approximatley 3,941 acres. 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, including the scenic and geologic values, would be provided long-term protection if designated wilderness.

Under Alternatives 6, 7, or 8, the entire area would be converted to Recommended Wilderness LUD. No timber harvest would be allowed and the potential for other uses and development, including recreation, minerals, and some special uses, 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 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 308 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | 123,602 | 161,922 | 161,922 | 161,922 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Nonwilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | | | | | | | | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | 32,210 | 32,210 | 32,210 | 32,210 | 5,871 | | | |
| Semi-remote Recreation | 218 | 218 | 218 | 218 | | | | |
| Recommended LUD II | | | | | | | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | 25,616 | 25,616 | 25,616 | 25,616 | 782 | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | 103,879 | 103,879 | 103,879 | 103,879 | 31,666 | | | |
| **TOTAL** | **161,922** | **161,922** | **161,922** | **161,922** | **161,922** | **161,922** | **161,922** | **161,922** |
| Suitable Timber Lands | 20,546 | 20,546 | 20,546 | 20,546 | 3,941 | 0 | 0 | 0 |

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Douglas Island (310)

**ACRES (NFS):** 25,008

**BIOGEOGRAPHIC PROVINCE:** Northern Coast Range

**ECOLOGICAL SECTION:** Kootznoowoo Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 17

### I. Overview and Description

**(1) Location and Access:** Douglas Island is located directly across Gastineau Channel from the city of Juneau. The Douglas Island Roadless Area includes only a portion of this island but is completely within the boundaries of the City and Borough of Juneau. City and Borough of Juneau lands border the area on all sides, except the west, which is bordered by private land. The North Douglas Highway borders the area to the north and east, extending along the shoreline from Mount Meek to Treadwell. There is a "doughnut hole" of City and Borough lands which comprise the Eagle Crest Ski area in the center of the island. These non-National Forest System lands are accessed via Fish Creek Road from the north. The ski area, access road, and associated corridor are excluded from the roadless area.

Juneau is 2 to 5 miles east of the area and has regularly scheduled flights and is on the Alaska Marine Highway. The Douglas Island Roadless Area may be accessed from the Juneau-Douglas road system or by using several trails that enter or border the area. There are no places suitable for landing wheeled airplanes. Access into the interior is by foot or helicopter. Snowmobiles and back-country skies are used during winter months to access the area.

**(2) History:** Douglas Island is directly across Gastineau Channel from Juneau, the capitol city of Alaska. The history of Douglas Island has been linked to that of Juneau since the discovery of gold in the area in the 1860s. Historical remains found in this area include the Treadwell Ditch and ditch tenders' cabin. Goldschmidt and Haas (1946) identified extensive aboriginal uses, including berrying, hunting or trapping, gardens, and trolling for king salmon. They also identified a village, a cemetery, a smokehouse or cabin, and a former camp. More recent history from the 1930s includes remains from a ski tow and two cabins, one of which, the Dan Moller Cabin, has been restored and is in the public recreation cabin reservation system.

**(3) Geography and Topography:** The area is generally characterized by rounded landforms and moderately significant geologic features. Elevations range from several hundred feet to over three thousand feet.

The area contains 9 miles of shoreline on saltwater on the southeast side of the island. This area also includes 505 acres of alpine and 460 acres of rock but no ice or snow features. Eight small islands account for less than one acre.

**(4) Ecosystem:**

**(a) Classification:** Biogeographic Province. The area is classified as being in the Northern Coast Range Biogeographic Province. This province is generally characterized by rugged and glaciated topography. This province has little maritime influence. Yellow-cedar plant associations occur in this province.

Ecological Section/Subsection. The Douglas Island Roadless Area is contained entirely within the Inside Kootznoowoo Fjordlands Ecological Section (M247D). This area is represented by two ecological subsections (see table below). The Stephens Passage Volcanics Ecological Subsection covers the vast majority of the roadless area and is underlain by ancient volcanic rock and ash. Metamorphosed slates, schists, and phyllites are found on the eastern side of the island only. The mountains of Douglas Island are

rounded with steep, deeply incised slopes. High elevations are vegetated by alpine meadows, barrens, and stunted krummholz forests. The well-drained soils of the mid- and lower slopes support productive forests of western hemlock and Sitka spruce. Landslide and avalanche chutes are common. The poorly drained soils of the lowlands support wetlands on about a fifth of the island's area. The Stephens Passage Glaciomarine Terraces Ecological Subsection covers about 4 percent of the roadless area. It contains glaciomarine terraces that grade into mountain slopes. Estuaries and marshes can be found along the coastal areas of the terraces while hemlock-spruce forests dominate the mountain slopes (Nowacki et al., 2001).

| Ecological Section | Ecological Subsection | Percent of Roadless Area |
|---|---|---|
| Kootznoowoo Fjordlands | Stephens Passage Volcanics | 96% |
| | Stephens Passage Glaciomarine Terraces | 4% |

**(b) Soils:** Alpine portions of this area consist of shallow to bedrock soils, primarily of organic and mineral origin. The majority of the area's soils range from well-developed, deep, colluvial soils on moderate to steep slopes, and poorly drained, mineral and/or organic soils on benches and moderate slopes. Occurrences of muskegs with reduced productivity occur on these benches. The entire area has been overridden by glaciers, with a predominance of glacial till throughout the island, especially on mid- to lower slopes.

**(c) Vegetation:** The area is characterized by a moderately varied vegetative pattern of typical spruce/hemlock forest. Natural forest openings occur in the form of small, frequent muskegs. However, due to their small size and association with forested sites, accurate acreage estimates are difficult and none have been mapped in this area.

There are approximately 21,408 acres mapped as forest land, of which 13,557 acres or 63 percent are mapped as productive old-growth forest. Of the productive old growth, 5,295 acres or 39 percent are mapped as high-volume old-growth forest. The productive old growth includes about 759 acres of high-volume, coarse-canopy old growth. There is no second growth due to harvesting in this area.

**(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 partially located in this area (VCU 34) was rated highly for both sport and commercial fish. None of the VCUs that comprise the area were inventoried as highly valued for estuaries. In addition, none of these VCUs were listed as primary salmon or sportfish producers by the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998). One VCU (VCU 37) was identified as a non-producer of salmon, while the other VCUs that comprise the area were identified as secondary producers.

Streams in this area provide habitat for chinook, coho, pink, and chum salmon, cutthroat and steelhead trout, and Dolly Varden char. The Anadromous Waters Catalogue (ADF&G, 2000) identifies Fish Creek, Peterson Creek, Hilda Creek, and Grant Creek as major fish producers.

**(e) Wildlife Resources:** Larger mammals in this area include black bear, wolves, and Sitka black-tailed deer. Furbearers include river otter, marten, marmot, mink, and ermine (MacDonald and Cook, 1999).

**(5) Management Direction and Current Uses:** The Douglas Island Roadless Area was allocated to three Land Use Designations (LUD) in the 1997 Tongass Land and Resource Management Plan. These three LUDs are Minerals, Transportation and Utility System (TUS), and Semi-remote Recreation. The Minerals and TUS LUDs are secondary LUDs, which overlays the other land uses.

| LUD | Acres |
|---|---|
| Minerals* | 1,035* |
| Transportation and Utility System | NA |
| Semi-remote Recreation | 25,008 |

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

This roadless area was allocated to two overlay development LUD overlays, Minerals and Transportation and Utility System. The Minerals LUD overlay accounts for approximately 4 percent of the roadless area. The Transportation and Utility System LUD includes an existing power transmission corridor that runs just south of the area's north border and a potential power transmission corridor that follows part of the west border.

All of the land within this roadless area was allocated to one non-development LUD, Semi-remote Recreation. The area, with its immediate proximity to Juneau and Douglas, receives heavy use. Hunting is popular, as are hiking, camping, climbing, berry picking, cross-country skiing, and snowmobiling. Much of the area is bordered by roads and trails. A number of trails extend into the area and there is a centrally located recreation cabin (Dan Moller). The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) indicated that with the exception of VCUs 35 and 37, the Douglas Island Roadless Area is typically not used for subsistence. VCUs 35 and 37 were identified as subsistence use areas with a low sensitivity to disturbance.

There are two Special Use Permits for recreation cabins on the south side of the island.

**(6) Appearance (Apparent Naturalness):** The area has high scenic value and is essentially unmodified except in the area of the trails and cabin. The "ski bowl" around the cabin contains remains of the old downhill ski tow. The area retains a natural landscape that can be seen from Stephens Passage and Fritz Cove. From northeast Gastineau Channel, the area provides a natural backdrop to the visible development on the adjacent roaded area.

**(7) Surroundings (External Influences):** Many external activities influence this area because of its proximity to Juneau and Douglas. The City and Borough of Juneau operate a downhill ski operation in the "doughnut hole" in the center of the Douglas Island Roadless Area. Access to this ski area is provided by Fish Creek Road. Downtown Juneau is located directly across Gastineau Channel from this roadless area. As a result, it is possible to view residential and business buildings, cruise ships, numerous boats, and frequent air traffic by both floatplanes, jets, and helicopters from the ridges within the area. The south and west sides of the island are popular hunting and fishing areas, and boat traffic is common. The roadless area is surrounded by land owned by the State, Native Corporations, or private entities.

**(8) Attractions and Features of Special Interest:** The primary attractions of this area are good hunting, hiking, beautiful scenery, high alpine meadows, and relatively easy access. The area contains three inventoried recreation places, which cover 19,468 acres, or 78 percent of the roadless area. There are two improved trails, the Treadwell Ditch and Dan Moller Trails, in the area and one public recreation cabin. The cabin is popular year-round. Winter sports such as cross-country skiing and snowmobiling are important uses of this area to local residents. Historic remains such as the Treadwell Ditch are also attractions of interest.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The roadless area boundaries have not changed significantly between 1989 and 2003.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The majority of the area retains a high natural integrity and a moderate apparent naturalness. Existing modifications to the area include two trails, a recreation cabin, and evidence of past use. The area is also affected by its close proximity to roads and an urban environment. While the area appears natural and appropriate for wilderness, the surrounding developed and urban land uses suggest that managing this area as wilderness would be difficult.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is moderate opportunity for solitude and primitive recreation, especially on the western sides of the area. Other users, floatplanes, helicopters, boats, cruise ships, snowmobiles, and traffic noise all contribute to the lack of a sense of solitude, primarily on the east side of the island.

There is one public recreation cabin and two trails in the area. The area almost completely surrounds the Eagle Crest Ski Area and the road corridor which leads to the ski area. Much of the use in the Douglas Island Roadless Area occurs along the coastline or public trails and, as a result, visitors are generally not outside of the sights and sounds of other human activity. There was no outfitter/guide use identified in this area in 1999.

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 |
|---|---|---|
| Semi-Primitive Non-Motorized (SPNM) | 16,201 | 65% |
| Semi-Primitive Motorized (SPM) | 6,746 | 27% |
| Roaded Natural (RN) | 1,778 | 7% |
| Roaded Motorized (RM) | 243 | 1% |
| Rural (R) | 32 | 0% |

The area contains three inventoried recreation places, which cover 19,468 acres, or 78 percent of the roadless area

| ROS Class | # of Rec. Places* | Total Acres |
|---|---|---|
| SPNM | 1 | 16,041 |
| SPM | 1 | 3,184 |
| RN | 1 | 0 |
| RM | 2 | 242 |
| 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.

The roadless area surrounds the Eaglecrest Ski Area, which offers winter sporting 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).

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 Douglas Islands Roadless Area was given a rating of 18 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 17. This rating reflects the high level of developments and activities associated with the urban area of Juneau.

**(4) Ecologic and Geologic Values:** This roadless area is located on Douglas Island. Lower slopes are generally densely forested, but sometimes exhibit a combination of muskeg openings, brush, and scattered tree cover up to approximately 2,500 feet in elevation. Upper slopes and summits appear barren from a distance, but usually offer a variety of alpine vegetation, as well as numerous rock outcroppings.

**(a) Fish Resources:** None of these VCUs were listed as primary salmon or sportfish producers by the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998). One VCU (VCU 37) was identified as a non-producer of salmon, while the other VCUs that comprise the area were identified as secondary producers.

Streams in this area provide habitat for chinook, coho, pink, and chum salmon; cutthroat and steelhead trout; and Dolly Varden char. Fish Creek provides habitat for chinook, coho, pink, and chum salmon, as well as Dolly Varden char. Peterson and Hilda Creeks are inhabited by coho, pink, and chum salmon; cutthroat trout; and Dolly Varden char. In addition, Hilda Creek provides habitat for steelhead trout. Coho salmon are found in Grant Creek (ADF&G, 2000).

**(b) Wildlife Resources:** Larger mammals in the area include black and brown bears, wolves, and Sitka black-tailed deer. Furbearers include river otter, marten, marmot, mink, and ermine (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. Queen Charlotte goshawks have been found in this roadless area. These forest-dwelling hawks 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 are no glaciers or unique geologic features.

**(5) Scientific and Educational Values:** There are no Research Natural Areas in this roadless area. There is, however, high interest in providing recreational opportunities for the community of Juneau in this roadless area and on Douglas Island as a whole. Winter sports such as cross-country skiing, snowmobiling, and recreation cabin use are all important to local residents. Historic remains such as the Treadwell Ditch are also attractions of interest.

**(6) Scenic Values:** The visual character type of this area is Admiralty-Chichagof. For the most part, landforms are generally rounded. Lower slopes are generally densely forested, but sometimes exhibit a combination of muskeg openings, brush, and scattered tree cover up to approximately 2,500 feet in elevation. Upper slopes and summits appear barren from a distance, but usually offer a variety of alpine vegetation as well as numerous rock outcroppings. The area has high scenic value and is essentially unmodified except in the area of the trails and cabin. The "ski bowl" around the cabin contains remains of the old downhill ski tow. The area retains a natural landscape that can be seen from Stephens Passage and Fritz Cove. From northeast Gastineau Channel, the area provides a natural backdrop to the visible development on the adjacent roaded area.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Stephens Passage (Alaskan Marine Highway); Peterson Creek, North Douglas Road, and Fish Creek Road (Public Use Roads); Stephens Passage and Gastineau Channel (Saltwater Use Areas); Stephens Passage, Gastineau Channel, and Fritz Cove (Small Boat Routes); Juneau and Douglas (Communities); Dan Moller (Public Recreation Cabin); Eaglecrest Ski Area (Private or Public Resort); Dan Moller Trail (Hiking Trail); and Gastineau Channel and Fritz Cove (Boat Anchorages).

The majority of this area (approximately 93 percent) was inventoried in Variety Class B (possessing landscape diversity that is common for the character type) with five percent inventoried in Variety Class C (possessing a low degree of landscape diversity). Approximately 2 percent of the area was not inventoried.

The majority of the area, approximately 98 percent, was inventoried in Existing Visual Condition (EVC) I. These areas appear to be untouched by human activity. The remaining 2 percent was not inventoried.

**(7) Social, Cultural, and Historical Values:** Douglas Island is located directly across Gastineau Channel from the City of Juneau. The history of Douglas Island has been linked to that of Juneau since the discovery of gold in the area in the 1860s. Historical remains found in this area include the Treadwell Ditch and ditch tenders' cabin. Goldschmidt and Haas (1946) identified extensive aboriginal uses including berry picking, hunting or trapping, gardens, and trolling for king salmon. They also identified a village, a smokehouse or cabin, and a former camp. More recent history from the 1930s includes remains from a ski tow and two cabins, one of which (Dan Moller Cabin) has been restored and is in the public recreation cabin reservation system.

There is one public recreation cabin in the area. This area almost completely surrounds the Eagle Crest Ski Area. Much of the use in the Douglas Island Roadless Area occurs along the coastline or public trails and, as a result, visitors are generally not outside of the sights and sounds of other human activity. There was no outfitter/guide use identified in this area in 1999.

The Tongass Fish and Wildlife Resource Assessment indicated that with the exception of VCUs 35 and 37, the Douglas Island Roadless Area is typically not used for subsistence. No VCUs were listed among the VCUs with highest sensitivity to disturbance of subsistence use areas. The VCUs in this area were also not 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:** With the exception of the relatively short length of coastline that borders the area to the southeast, the area's boundaries are all man-made and do not follow natural topographic features. Lands owned by the City and Borough of Juneau and Native Corporation lands border the area. In addition, there is a "doughnut ring" of non-National Forest System lands in the center of the area associated with a ski area. This roadless area would be difficult to manage as wilderness because of the mixed ownership of the island and the difficulties associated with defining area boundaries on the ground. Activities on the adjacent lands would not complement wilderness management.

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

**(1) Recreation, Including Tourism Potential:** The easily accessible alpine environment is perhaps the primary recreation attraction, and there is great potential for increased recreation opportunities in this area. Additional trails for hikers, cross-country skiers, and snowmobilers are possibilities. A trail/hut system in conjunction with a trail circumnavigating Douglas Island has also been considered.

The Shoreline Outfitter/Guide EIS, which is currently being prepared, may identify enclaves for future recreation activities along the western shoreline.

**(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 in this area.

**(4) Wildlife Resources:** No wildlife resource management projects are planned in this area.

**(5) Timber Resources:** There are approximately 13,557 acres mapped as productive old growth and no acres mapped as second growth due to harvest in the roadless area. Of these acres, 9,292 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUD assigned to this area, the entire area is classified as unsuitable for timber production. Local residents depend on Douglas Island, to some extent, for firewood. 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. There are no known epidemic disease occurrences.

**(7) Minerals:** Douglas Island has been identified as an area of potential mineral development. Currently, there are several claims in the southwest portion of the Douglas Island Roadless Area. This area was not, however, assigned to the Minerals LUD in the 1997 Tongass Land and Resource Management Plan.

The roadless area contains 2,609 acres of land identified as a mineral activity tract having a high or moderate potential for expanding mineral exploration or development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). A total of 1,035 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. The Minerals LUD is also intended to ensure that minerals are developed in an environmentally sensitive manner, and that other high-valued resources are considered when minerals development occurs. In addition, the roadless roadless area contains an estimated 6,490 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991) all of which are classified as having low potential.

**(8) Transportation and Utilities:** The area includes an existing power transmission corridor that runs just south of the area's north border and a potential power transmission corridor that follows part of the west border. The 1997 LUD map also identifies a proposed state road corridor along the west shoreline. This would represent an extension of the North Douglas Highway along the existing trail that presently borders the roadless area. Fish Creek Road passes through the north section of the area. This road and associated corridor are excluded from the roadless area. Designating the area wilderness would not likely affect these existing and potential transportation corridors.

**(9) Water Availability and Use:** The recreation cabin presents the only water demand within this area. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

**(10) Areas of Scientific Interest:** This roadless area contains no Research Natural Areas.

**(11) Land Use Authorizations:** There are Special Use Permits for two recreation cabins on the southern side of the island.

**(12) Land Status:** This roadless area comprises all National Forest System lands. This roadless area is adjacent to private lands, which are primarily located along the west coastline. A land exchange has been proposed for a small area within the Eagle Crest Road corridor.

## 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 either recreational or hunting uses by local users and residents. Snowmobilers are concerned that they will be prevented from using the area, and there is desire for a higher elevation access for them in the winter. Some local residents would like to see additional cabins built in the area or a hut/trail system built and implemented.

**(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 Douglas Island Roadless Area. In 2001, HR 2908 proposed that the area 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 letters received about the Juneau area opposed any timber harvest allocations, especially on Douglas Island. Commenters stated that this area is important locally for recreation, hunting, and food gathering and should be managed for semi-primitive recreation (at a minimum). Commenters also noted that Douglas Island is on the ferry and cruise ship routes and, therefore, an important tourist viewshed. Logging would not be appropriate in this area. The Goldbelt Corporation stated that how this area is managed influences management of their lands.

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.

The Shoreline Outfitter/Guide EIS, which is currently being prepared, may designate some sites as enclaves for future recreation use.

**(f) Public Input Expressed During Supplemental EIS Process:** SEACC recommended that this area, which is adjacent to the largest population center in Southeast Alaska, be designated LUD II. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 310 for permanent protection as LUD II

**(2) Nearby Roadless and Wilderness Areas and Uses:** This area is located on Douglas Island and is not part of a larger unroaded landmass. The area is within City and Borough of Juneau jurisdiction and is surrounded by City and Borough of Juneau lands, Native Corporation lands, and the North Douglas Highway. The City and Borough-managed Eaglecrest Ski Area is located in the center of the 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) | 5 | 10 |
| Stika (Pop. 8,835) | 85 | 150 |
| Hoonah (Pop. 860 | 30 | 60 |
| Angoon (Pop. 572) | 50 | 80 |

The nearest stop on the Alaska Marine Highway is the Auke Bay Terminal in Juneau.

**(4) Relative Contribution to the National Wilderness Preservation System:** Douglas Island is located directly across Gastineau Channel from the city of Juneau. The Douglas Island Roadless Area includes only a portion of this island but is completely within the boundaries of the City and Borough of Juneau. City and Borough of Juneau lands border the area on all sides except the west, which is bordered by private land. The North Douglas Highway borders the area to the north and east, extending along the shoreline from Mount Meek to Treadwell. There is a “doughnut hole” of City and Borough lands which comprise the Eagle Crest Ski area in the center of the island. These non-National Forest System lands are accessed via Fish Creek Road from the north. The ski area, access road, and associated corridor are excluded from the roadless area. The roadless area is generally characterized by rounded landforms and moderately significant geologic features. Elevations range from several hundred feet to over three thousand feet. Lower slopes are generally densely forested, but sometimes exhibit a combination of muskeg openings, brush, and scattered tree cover up to approximately 2,500 feet in elevation. Upper slopes and summits appear barren from a distance, but usually offer a variety of alpine vegetation as well as numerous rock outcroppings.

The majority of the area is natural appearing; however the area is heavily influenced by developments and activities in adjacent areas. The roadless area has moderate natural integrity and relatively high apparent naturalness. The opportunity for solitude is very low, and the opportunity for primitive recreation is low.

None of the landscape is considered distinctive from a scenery standpoint. A significant value of this roadless area is its relatively large size and mostly natural condition located basically in Juneau.

The roadless area includes about 5,295 acres of high-volume, old-growth forest. Of these acres, 759 are mapped as high-volume, coarse-canopy old growth.

The Douglas Island Roadless Area is classified as being in Northern Coast Range Biogeographic Province and makes up about 2 percent of the province. It is one of six inventoried roadless areas found in the province that

collectively make up about 66 percent of the province. Portions of the Chuck River and Tracy Arm-Fords Terror Wildernesses are within the province and make up about 23 percent of the province.

The Douglas Island Roadless Area lies completely within the Kootznoowoo Fjordlands Ecological Section and represents 2 percent of the entire ecological section. This ecological section is well represented by existing wilderness (78 percent) and other existing non-development LUDs (12 percent including 1 percent in LUD II).

The majority of this roadless area (96 percent) is within the Stephens Passage Volcanics Ecological Subsection; this portion of the roadless area represents 25 percent of the entire ecological subsection within the Tongass National Forest boundary. This ecological subsection is well represented in existing wilderness (58 percent) and other non-development LUDs (26 percent). The Stephens Passage Glaciomarine Terraces Ecological Subsection represents 4 percent of the Douglas Island Roadless Area. This portion of the roadless area represents 0.4 percent of the entire ecological subsection, which is well represented by existing wilderness and other non-development LUDs (36 and 31 percent, respectively) with an additional 5 percent in LUD II.

The Douglas Island 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 considerable local and national support for management of the area in an unroaded condition, but little support for designation of the area as wilderness. Designation would create a wilderness with high public use and heavily influenced by ongoing developments and activities in adjacent areas. 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 Douglas Island 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; 4 percent or 1,035 acres of the roadless area has a Mineral LUD overlay and there is an existing and a potential power transmission corridor in a Transportation and Utility System LUD overlay. The roadless area contains 2,609 acres of land identified as a mineral activity tract having a high or moderate potential for expanding mineral exploration or development of locatable minerals. In addition, the roadless area contains an estimated 6,490 acres of undiscovered locatable mineral resources, all of which are classified as having low potential. The recreation, mineral, and special use programs would continue. The values associated with the natural settings of the roadless area are protected under the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, mineral, 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, minerals, and special uses 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 310 (in acres)**

| Land Use Designation | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 | Alt 7 | Alt 8 |
|---|---|---|---|---|---|---|---|---|
| Recommended Wilderness | | | | | | | | 25,008 |
| Wilderness | | | | | | | | |
| Recommended Wilderness Nat. Mon. | | | | | | | | |
| Wilderness National Monument | | | | | | | | |
| Nonwilderness National Monument | | | | | | | | |
| Research Natural Area | | | | | | | | |
| Special Interest Area | | | | | | | | |
| Remote Recreation | | | | | | | | |
| Enacted Municipal Watershed | | | | | | | | |
| Old-growth Habitat | | | | | | | | |
| Semi-remote Recreation | 25,008 | 25,008 | 25,008 | 25,008 | 25,008 | | 25,008 | |
| Recommended LUD II | | | | | | 25,008 | | |
| LUD II | | | | | | | | |
| Wild, Scenic, Recreational River | | | | | | | | |
| Experimental Forest | | | | | | | | |
| Scenic Viewshed | | | | | | | | |
| Modified Landscape | | | | | | | | |
| Timber Production | | | | | | | | |
| **TOTAL** | **25,008** | **25,008** | **25,008** | **25,008** | **25,008** | **25,008** | **25,008** | **25,008** |
| **Suitable Timber Lands** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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