

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 about 36 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.

Appendix C

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.

Appendix C

| 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

Appendix C

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.

Appendix C

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.

Appendix C

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 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 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

Appendix C

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 |