

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 Tye 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 Tye 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.

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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.

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In 1984, a 138 kV powerline was constructed from the Tye 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 Tye powerline, which would connect the Tye 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 Tye powerline along the south side of Bradfield Canal; the penstock gate house and helicopter pad at Tye 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 Fjords 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 Tye power site or the freshwater lakes may temporarily distract visitors in the area. The development at the Tye 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 Tye 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 Tye 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 Tye 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.

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(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: VCU's 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, VCU's 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

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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

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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.

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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 Fjords 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 Fjords 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 Tye 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.

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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