

# Appendix C

## INDIVIDUAL ROADLESS AREA DESCRIPTION

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

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

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

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

**2003 WILDERNESS ATTRIBUTE RATING:** 20

### **I. Overview and Description**

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

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

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

(4) **Ecosystem:**

(a) **Classification: Biogeographic Province.** The area is located in three biogeographic provinces: Central Coast Range, North Misty Fiords, and Ice Fields. The landscape in these provinces ranges from rugged and glaciated topography through considerable topographic relief with many glaciers to permanent icefields, active glaciers, and nunataks (mountain peaks between glaciers). This roadless area is more characteristic of the higher portion of the region but without the massive ice fields. There are no known areas of unique or uncommon plant/soils associations. There is a small undeveloped hot spring located south of the East Fork of the Bradfield River.

**Ecological Section/Subsection.** The Bradfield Roadless Area is predominantly within the Boundary Ranges Ecological Section (M246B) and includes a small portion within the Coast Mountain Batholith Fjordlands Ecological Section (M247K). These areas are represented by two ecological subsections (see table below). The Boundary Ranges Icefields Ecological Subsection represents the majority of the Bradfield Roadless Area. A northwest-southeast trending batholith of resistant granite and granodiorite underlies this portion of the Coast Mountains. It consists of a discontinuous mix of icefields and glaciers separated by river valleys and pierced by nunataks and scree fields. Forests comprise a minor part of the

vegetation along coasts and rivers. The Misty Fiords Granitics Ecological Subsection covers the remainder, approximately 10 percent, of the roadless area. It is glacially scoured, rugged granitic batholith. Soil development, and consequent forest establishment, is restricted to isolated patches in depositional zones (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Boundary Ranges	Boundary Ranges Icefields	90%
Coast Mountain Batholith Fjordlands	Misty Fiords Granitics	10%

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

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

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

Estuary soils, located in the flats around the mouth of the Bradfield River, are mostly deep, wet and tend to have a basic pH due to the influence of saltwater.

**(c) Vegetation:** Alpine vegetation (mapped as 2,848 acres) dominates land above 2,500 feet elevation. Below that elevation the steep mountain sides and river floodplains are heavily forested with Sitka spruce and lesser amounts of western hemlock. The steep slopes are heavily marked with snowslide and landslide paths which are typically covered with grass, alders and willows. Stands of cottonwood are also found along the valley bottoms and floodplains. Less than 100 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 66,729 acres mapped as forested land, of which 23,623 acres or 35 percent are mapped as productive old-growth forest. Of the productive old growth, 4,274 acres or 18 percent are mapped as high-volume old-growth forest. The productive old growth includes about 47 acres of high-volume, coarse-canopy old growth. There is no mapped second-growth forest where timber harvest has occurred in the past.

**(d) Fish Resources:** Fish resources were rated by the Alaska Department of Fish and Game (ADF&G) in its Forest Habitat Integrity Program (1983). These ratings describe the value of VCUs for sport fish, commercial fish, and estuaries. The Bradfield Roadless Area encompasses six VCUs. Three of these VCUs (513, 514, and 515) on the North Fork of the Bradfield River were rated high value for both sport and commercial fish. Two of the other VCUs (516 and 517) on the East Fork of the Bradfield are rated high value for just commercial fish. The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) identified VCU 514 as a primary sportfish producer. VCUs 512 and 516 were identified as non-producers of salmon.

The two main channels of the Bradfield River are identified by the ADF&G as important for producing salmon. The river produces coho, pink, chum, sockeye and chinook salmon, as well as steelhead and cutthroat trout, and Dolly Varden char. The river also has a spring run of eulachon (hooligan).

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(e) **Wildlife Resources:** Brown bear are prevalent in the area. A small population of mountain goats ranges over the area, as do black bear, deer, wolves, and moose. Bald eagles nest in the area.

(5) **Management Direction and Current Uses:** The area was allocated to four Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These four LUDS are Timber Production, Semi-remote Recreation, Remote Recreation, and Old-growth Habitat.

<b>LUD</b>	<b>Acres</b>
Timber Production	119,375
Semi-remote Recreation	43,481
Remote Recreation	27,505
Old-growth Habitat	13,772

Approximately 58 percent of the roadless area was allocated to one development LUD, Timber Production. The Timber Production LUD is located in the most of the southern part of the roadless area. This LUD surrounds the Bradfield River drainages and extends to form the northern boundary of the Misty Fiords National Monument.

Approximately 42 percent of the roadless area was allocated to non-development LUDs (Semi-remote Recreation, Remote Recreation, Old-growth Habitat). Land northwest of the North Fork of the Bradfield River was allocated to the Semi-remote Recreation and Remote Recreation LUDs. The Semi-remote Recreation LUD was assigned to approximately 21 percent of the roadless area. Approximately 13 percent of the roadless area was allocated to the Remote Recreation LUD. The Old-Growth LUD was assigned to approximately 7 percent of the roadless area. This LUD is located in small pockets of land adjacent to the north and east forks of the Bradfield River.

The area at the head of Bradfield Canal around the power generation facility receives moderately-heavy use by people visiting and working at the site. Present recreation use levels are low except around the grassflats at the mouth of the rivers. Moderate amounts of brown bear and waterfowl hunting takes place in the lower Bradfield area. Goat hunting is popular in the higher elevations. Outfitter and guide use of the area for hunting and fishing occurs, but not every year. Limited subsistence use, including hunting and spring hooligan fishing, takes place at the head of the Bradfield Canal.

(6) **Appearance (Apparent Naturalness):** Overall, the area has high scenic quality with a natural appearing landscape and provides spectacular scenery from the Bradfield Canal, the north and east forks of the Bradfield River, and from within the area. There is an active mining claim with a small cabin located on the North Fork of the Bradfield River.

(7) **Surroundings (External Influences):** This roadless area is part of a large unroaded area that stretches from the Misty Fiords National Monument south of the area, to the Skagway Juneau Icefield Roadless Area near Juneau. Low-flying aircraft accessing the Tyee power generation site are common and may attract attention in the southwestern portion of the area. Timber harvest in the valley bottoms that extend into the roadless area is also an external influence. The remainder of the surrounding area is generally isolated.

(8) **Attractions and Features of Special Interest:** The natural features of the area, the scenery, and the opportunity to see wildlife and to study the processes which formed this country may all be attractions. The area contains three inventoried recreation places that cover 1,151 acres, or approximately 1 percent of the roadless area. These places are located at the head of the canal and along the north and east forks of the Bradfield River. There are no improved trails in the area. Some recreationists/hunters hike or use ATVs along the first two miles of the old roads located on state land up to the location of the first river crossing, where the bridges have been removed.

(9) **Differences between the 1989 and 2003 Roadless Area Boundary:** The changes in boundaries between 1989 and 2003 were the exclusion of small areas due to changes in land ownership near the mouth of the Bradfield River, and the inclusion of more area along the north and east forks of the Bradfield River.

## II. Capability for Management as Wilderness

**(1) Natural Integrity and Apparent Naturalness:** The majority of this roadless area (85 percent) is natural appearing, with only ecological change occurring. The White River drainage, the upper elevations, and the upper reaches of both forks of the Bradfield River have not been modified. The valley bottoms and lower slopes along much of the Bradfield River have, however, been extensively roaded and timber stands have been harvested. These roads have been reclaimed in several places by the natural high energy movement of the river in its floodplain. Although the modified areas are not part of the roadless area, they extend into and are visible from the area, and affect the natural integrity and apparent naturalness. The portions of the area that are natural appearing are suitable for wilderness classification.

**(2) Opportunity for Solitude, Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and primitive recreation within the area; however, boats and low-flying airplanes traveling to the Tye power generation site are common and may be observed by people in this roadless area. Present recreation use levels are low except around the grassflats at the mouths of the rivers. Generally, a person camped or traveling inland is unlikely to see others.

Access on land is difficult, offering a high degree of physical challenge. As with all backcountry areas on the Tongass, the opportunity for challenge and risk in this area is high. The climate, the rugged terrain, the isolation and distance from population centers with medical facilities, the barriers to communication, and the presence of large wild animals all contribute to the need for good preparation and knowledge of backcountry survival skills for anyone using this area. Hypothermia and bear encounters are just two examples of the many risks that must be considered before traveling in the backcountry of Southeast Alaska.

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

ROS Class	Acres	Percent of Total ROS
Primitive (P)	148,534	73%
Semi-Primitive Non-Motorized (SPNM)	30,683	15%
Semi-Primitive Motorized (SPM)	4,670	2%
Roaded Motorized (RM)	20,210	10%

The area contains three inventoried recreation places that cover 1,151 acres, or approximately 1 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	0	0
SPNM	0	0
SPM	1	976
RM	3	174

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

There are no public recreation facilities in the area. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the community of Wrangell in less than 2 hours, and from Ketchikan in approximately 8 hours.

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

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The inventoried roadless areas of the Tongass National Forest were rated according to this system in 1989 for the Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Bradfield Roadless Area was given a rating of 25 out of 28 possible points. The rating was re-evaluated for this updated version of the Analysis of the Management Situation. Based on this re-evaluation, the area was given a rating of 20. This rating reflects the degree of developments in the Bradfield drainage and the effects on the natural integrity and apparent naturalness of the area.

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

This roadless area is only partially forested. Lower elevation mountain sides and floodplains in the Bradfield Roadless Area are heavily forested with Sitka spruce, as well as smaller amounts of western hemlock.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment identified VCU 514, extending inland from the head of Bradfield Canal, as a primary salmon and sportfish producer. VCUs 512 and 516,, east and west of VCU 514, were identified as non-producers of salmon (ADF&G, 1998).

The ADF&G identified the two main channels of the Bradfield River as important for producing salmon. The river produces coho, pink, chum, sockeye and chinook salmon, as well as steelhead and cutthroat trout and hooligan. The tributaries north of the mainstem hold most of the steelhead spawning habitat. The mainstem below the confluence of the tributaries provides habitat to all five Pacific salmon species. This area contains high value fish habitat for spawning and access. Several commercial fisheries harvest fish from the Bradfield system. A high load of suspended sediment (glacial flour) severely reduces water clarity in the mainstem and many sidechannels.

**(b) Wildlife Resources:** Brown bear are prevalent in the area. A small population of mountain goats ranges over the area, as do black bear, moose, Sitka black-tailed deer, and wolves. Bald eagles are known to nest in the area.

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

**(d) Karst, Cave, and Other Geologic Resources:** There are no known karst and cave resources in the area. There is a small, undeveloped hot spring located south of the East Fork of the Bradfield River.

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

**(6) Scenic Values:** The visual landscape is characterized by a highly-complex terrain dominated by rugged mountains, glaciers, and deep, narrow valleys containing the Bradfield and White Rivers. Only the Bradfield Canal marine route was identified as a Visual Priority Route or Use Area by the Forest Plan, within or adjacent to the roadless area.

The entire roadless area is inventoried Variety Class A, which possesses landscape diversity that is unique for the character type.

The majority of this roadless area, 84 percent, has an Existing Visual Condition (EVC) Type I, where only ecological change has occurred on the landscape. One percent of this roadless area is EVC Type III, where the natural appearance of the landscape remains dominant but changes in the landscape are noticed by the average forest visitor. The natural appearance of the landscape remains dominant. Eight percent of the area is in EVC Type IV, where changes in the landscape are easily noticed by the average person, but it resembles natural patterns. Seven percent has an EVC Type V, where changes in the landscape are obvious to the average person and appear to be major disturbances.

**(7) Social, Cultural, and Historical Values:** The area is located approximately 25 miles southeast of Wrangell, the closest community. The area contains three inventoried recreation places. Present recreation use levels are low except around the grassflats at the mouths of the rivers. While the area has historically been used by outfitters/guides, there was no recorded outfitter/guide use in this area in 2000. Limited subsistence use, including hunting and spring hooligan fishing, takes place at the head of the Bradfield Canal. Only VCU 514 extending inland from the head of Bradfield Canal, was listed among the VCUs with highest community use value. None of the VCUs were listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** The boundaries of this roadless area are well defined by topographic features that separate it from adjacent roadless areas and the Misty Fiords National Monument. The northeast boundary of the area is formed by the U.S./Canadian border. Entry into the roadless area is largely restricted to the single location at the head of Bradfield Canal or by helicopter. However, developments up the valleys may affect the manageability of the area as wilderness.

This area is part of a larger mainland unroaded area that includes the Misty Fiords National Monument to the south, the Harding Roadless Area to the west, and the Cone Roadless Area and the Canadian mountains to the north and east. The immediately surrounding lands were allocated to Remote Recreation and Wilderness LUDs. The Tyee power plant and powerline are located at the western edge of the roadless area and the powerline extends further west along the south side of the Bradfield Canal. Timber harvest has occurred further west of the area on the north side of the Bradfield Canal. The Harding River, which meets the requirements for Wild classification under the National Wild and Scenic River System, is located about two miles west of the Bradfield Roadless Area.

Timber harvest activities have occurred along the north and east forks of the Bradfield River, which extend into the roadless area. As a result, this roadless area is irregularly shaped with the harvest units that follow the drainage channels partially separating the area into three sections. Management of this area as wilderness or in an unroaded condition would require little change from current management conditions.

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

**(1) Recreation, Including Tourism Potential:** There is potential for outfitter and guide permits and for developed trails and cabins or shelters in this area. In 1996, the Alaska Visitor Association (AVA) proposed that the upper Bradfield Canal be developed for recreation facilities in their comments on the 1997 Tongass Land and Resource Management Plan. They identified the following specific facilities: trails, day use wildlife observatory with a daily capacity of 50 people, day use recreation facilities to support 100 people a day, a boat dock to support 50 people per day, and an overnight wildlife observatory to support 50 people.

**(2) Subsistence Uses:** Limited subsistence use, including hunting and spring hooligan fishing, takes place at the head of the Bradfield Canal. The existing patterns of subsistence activities in the area would not be affected by wilderness designation or management in an unroaded condition.

**(3) Fish Resource:** The Tongass Land Management Plan, amended Winter 1985-86 identifies fish habitat enhancement projects. No fish enhancement projects are planned in this area. There may be an opportunity for rehabilitation of stream channels damaged by roading and logging on the Bradfield River. Riparian thinning and modest channel restoration activities were initiated in 1996 in the North Fork and continue annually.

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(4) **Wildlife Resource:** As identified in the Tongass Land Management Plan (USDA Forest Service, 1997), wildlife habitat improvement projects are planned in the area. There is potential for waterfowl enhancement and browse regeneration (willow slashing) for moose.

(5) **Timber Resources:** There are approximately 23,623 acres mapped as productive old growth and no acres are mapped as second growth due to harvest in the roadless area. Of these acres, 7,225 acres are mapped as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,999 acres, or 1 percent of this roadless area are estimated to be suitable for timber production. Approximately 528 of the suitable acres are mapped as high-volume old growth; of these acres, 23 are mapped as high-volume, coarse-canopy old growth.

The areas along the north and east forks of the Bradfield River have been extensively roaded for harvesting. The road bridges built across the rivers were washed out by high water flows or were removed following harvest activities. Because harvesting has concluded, roaded access stops at the first bridge crossing which is approximately 2 miles from saltwater. As a result, these roads do not provide access to unharvested timber in the roadless area. This unharvested timber is generally in areas where high development costs may preclude development for the immediate future.

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

(7) **Minerals:** The area generally has a low minerals rating although the White River drainage is rated fairly high. The roadless area contains 1,032 acres of land identified as a mineral activity tract having a low potential for development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). In addition, the roadless area contains an estimated 34,083 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 24,027 of these acres are considered to have moderate potential for development.

There are several claims near the mouth of the Bradfield River and along the North Fork. A small cabin exists on an active mining claim on the north fork of the North Fork Bradfield River.

(8) **Transportation and Utilities:** Proposals existed for development of a 69 kV electric transmission line along the North Fork of the Bradfield River to the Canadian border in the late 1980s. This electric transmission line was intended to serve mining developments in Canada. Interest in the transmission intertie with Canada may be considered again in the future because of the Swan-Tyee Intertie which is under construction. In addition, the State of Alaska planned to assess the possibility of developing a road along the North Fork of the Bradfield River. The State has selected 5,040 acres of land at the head of Bradfield Canal to become a deep water port and community if the powerline and road to Canada are built. No development or formal development proposals were in place at the time of the 1997 Tongass Land Management Plan. The possibility of a new roadway to the Bradfield canal from the Cassier Highway in British Columbia was considered as part of the Southeast Alaska Transportation planning process. The McDowell Group completed a study of the Cassier/Bradfield/Ketchikan transportation route in 1994 for the Alaska Department of Transportation. It was also the subject of a 1998 feasibility report prepared by the U.S. Forest Service for the U.S. Senate Committee on Appropriations. This road was not, however, included in the March 1999 Southeast Alaska Transportation Plan (Alaska Department of Transportation and Public Facilities, 1999). The Bradfield route is included as a route for consideration by Southeast Conference in their ongoing assessment of long-term transportation needs for Southeast Alaska, and would cross the eastern portion of the Cone Roadless Area.

(9) **Water Availability and Use:** There are no developed recreation or other facilities located in this area. As a result, there is no demand for water for domestic use. There are a number of rivers running through the area but no hydroelectric development has been proposed to date. The Tyee hydroelectric generation project is located at the edge of the Bradfield Roadless Area.

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

**(11) Land Use Authorizations:** A support camp and a power generating plant, which uses water from Tyee Lake, are under Federal Energy Regulatory Commission (FERC) license near the head of Bradfield Canal. These land uses are located just west of the boundaries of the Bradfield Roadless Area.

Authorization was given for development of a 69 KV electric transmission line along the North Fork of the Bradfield River to the Canadian border in the late 1980s. This electric transmission line was intended to serve mining developments in Canada. No development or formal development proposals were in place at the time of the 1997 Tongass Land Management Plan, and the permit for the transmission line has terminated.

**(12) Land Status:** All land within this roadless area is National Forest System land. The Bradfield Canal (4,090 acres) and Tyee Lake (950 acres) State lands are located just on the western edge of the roadless area, and have resulted in a modified roadless area boundary.

#### **IV. Wilderness Evaluation (Need for Wilderness)**

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

**(a) Interest Expressed by Local Users and Residents:** Most use of the general area is associated with the Tyee power generation site, located west of the Bradfield Roadless Area and with brown bear, moose, and waterfowl hunting. Interest in developing potential road access to Canada through this area was expressed in the late 1980s by the Alaska State government. This potential project was not included in the March 1999 Southeast Alaska Transportation Plan.

**(b) Congressional Interest:** In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill did not include the Bradfield Roadless Area. In 2001, HR 2908 did not propose the area for wilderness, but did propose that it be classified as a Congressionally Designated LUD II area and managed in an unroaded condition.

**(c) Public Input During Forest Plan Revision and Appeals:** No specific recommendations for wilderness were made. A number of comments received during the Forest Plan revision and appeals referred to the general Bradfield Canal area.

In 1996 the Alaska Visitor Association proposed that the upper Bradfield Canal be developed with the following recreation facilities: trails, day use wildlife observatory with a daily capacity of 50 people, day use recreation facilities to support 100 people a day, boat dock to support 50 people per day, and an overnight wildlife observatory to support 50 people. The City of Petersburg and Ketchikan Gateway Borough requested that future development of the Bradfield Canal resource road and the Tyee Lake/Swan Lake Power Intertie and Transportation Project not be restricted. The Narrows Conservation Council opposed development of the Bradfield Road. The Wrangell Resource Council (WRC) requested that road construction and mineral development be prohibited in the area.

These comments refer to the general vicinity of the Bradfield Roadless Area but not necessarily the area itself. None of these comments specifically request that the roadless area or the general vicinity be designated as wilderness. The Wrangell Resources Council did, however, propose that the area be maintained in an unroaded condition.

**(d) Public Input During Roadless Area Conservation Rule and Road Management Policy Review:** The Southeast Alaska Conservation Council stated that the roadless conservation rule would block “harmful” road development in the Bradfield Canal area. Some commenters wanted all unroaded lands in the Tongass to be protected from development.

**(e) Public Input Expressed for Project-level EISs and Other Input:** No project-level comments on this roadless area have been identified

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**(f) Public Input Expressed During Supplemental EIS Process:** The city of Petersburg said they were opposed to designation of this area as wilderness because of the potential long-term economic impacts on the city.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) identified Roadless Areas 204, 205, 206, 207, 208, 209, 210, 528, and 529 as a contiguous complex of roadless areas that should be considered one roadless area and recommended it for permanent protection as LUD II. SEACC recommended that the Madan, Aaron, Cone, Harding, and Bradfield complex should be considered one roadless area and should be recommended for permanent protection as LUD II.

One individual called for long-term protection of this area.

**(2) Nearby Roadless and Wilderness Areas and Uses:** The Bradfield Roadless Area is part of a larger mainland unroaded land mass located between the Stikine-LeConte Wilderness to the northwest, the roadless Canadian mountains to the north, and Misty Fiords National Monument on the southeast. The mainland areas receive light use inland away from saltwater access.

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

<b>Community</b>	<b>Air Miles</b>	<b>Water Miles</b>
Ketchikan (Pop. 14,070)	45	100
Wrangell (Pop. 2,308)	25	50
Petersburg (Pop. 3,224)	60	80
Juneau (Pop. 30,711)	170	200

Wrangell is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Bradfield Roadless Area is located on the mainland approximately 25 miles southeast of Wrangell. The area is bounded on the west by the Harding Roadless Area, on the north by the Cone Roadless Area, and on the southeast and east by Misty Fiords National Monument. A small portion of the area is bounded on the northeast by the Canadian border. The roadless area is generally characterized as highly-complex terrain dominated by rugged mountains, many of which reach elevations of over 4,000 feet. Between the mountains are deep, narrow valleys containing the high-energy Bradfield and White Rivers that feed the head of the Bradfield Canal. Dominant waterforms include relatively small glaciers that occupy the highest mountains, numerous streams, waterfalls, and several small cirque lakes.

The roadless area itself is mostly unmodified, however it is influenced by the developments up the main drainages. The area has high natural integrity and moderate apparent naturalness. The opportunity for solitude is high, and the opportunity for primitive recreation is very high.

The roadless area has very high scenic quality; nearly all the landscape is considered distinctive or unique from a scenery standpoint. The area has small glaciers that occupy the highest mountains, numerous streams, waterfalls, and several small cirque lakes.

The roadless area includes about 4,274 acres of high-volume, old-growth forest. Of these acres, 47 are mapped as high-volume, coarse-canopy old growth.

Most of the Bradfield Roadless Area (approximately 85 percent) is within the Ice Fields province and makes up about 6 percent of that province. It is one of nine inventoried roadless areas found in the province that collectively make up about 79 percent of the province. Portions of the Tracy Arm-Fords Terror, Stikine-LeConte, and Misty Fiords National Monument Wilderness lie within the Ice Fields Province and make up about 33 percent of the province. About 7 percent of the roadless area lies within the Central Coast Range Biogeographic Province and makes up about 2 percent of the province. It is one of nine inventoried roadless areas found in the province that collectively make up about 59 percent of the province. Portions of the Stikine-LeConte Wilderness lie within the Central Coast Range province and make up about 38 percent of the province. The remaining 8 percent of the

Bradfield Roadless Area is classified as being in the North Misty Fjords Biogeographic Province and makes up about 2 percent of the province. It is one of three inventoried roadless areas found within the province that collectively make up about 16 percent of the province. Much of the Misty Fjords National Monument Wilderness is located in this province and makes up about 82 percent of the province.

The Bradfield Roadless Area lies within two ecological sections; it represents 1 percent of the Coast Mountain Batholith Fjordlands Ecological Section and 4 percent of the Boundary Ranges Ecological Section. These ecological sections are all well represented by existing wilderness (96 and 33 percent, respectively) and by other existing non-development LUDs (2 and 62 percent, respectively, including 1 percent in LUD II in Boundary Ranges Ecological Section).

Ninety percent of this roadless area is within the Boundary Ranges Icefields Ecological Subsection; this portion of the roadless area represents 4 percent of the entire ecological subsection, which is well represented in existing wilderness (32 percent) and by other existing non-development LUDs (61 percent). The remaining 10 percent of the roadless area is in the Misty Fjords Granitics Ecological Subsection; this portion of the roadless area represents 1 percent of the entire ecological subsection. This ecological subsection is well represented by existing wilderness (96 percent) and by other existing non-development LUDs (2 percent).

The Bradfield Roadless Area was rated 20 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 53<sup>rd</sup> from the highest (along with 16 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some local and national support for managing the roadless area in an unroaded condition, and there is very little support for designation of the area as wilderness. Designation would create a wilderness that has very high scenic qualities and could add to the size of the Misty Fjords National Monument Wilderness. The area has been the center of various proposals and studies for road and power intertie connections between Southeast Alaska and the Cassier Highway in British Columbia. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low to moderate.

### **V. Environmental Consequences**

The Bradfield Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 implemented. The highly scenic areas of the area would not be affected. Approximately 42 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 58 percent, although most potential development is in the vicinity of previous developments. The land in the development LUDs provides an estimated 1,999 acres that are suitable for timber production (2 percent of the suitable acres on the Wrangell Ranger District). Approximately 23 of the suitable acres are classified as high-volume, coarse-canopy old growth. The roadless area contains approximately 1,032 acres of land identified as a mineral activity tract having a low potential for experiencing mineral exploration and development of locatable mineral. In addition, the roadless area contains an estimated 34,083 acres of undiscovered locatable mineral resources; 24,027 of these acres are considered to have moderate potential for development. The timber sales, recreation, minerals, and special use programs would continue. Considerations for access between Southeast Alaska and Canada would continue. The values associated with the natural settings of the roadless area could be affected by developments allowed by the Forest Plan, mostly in the vicinity of the currently developed areas.

Under Alternative 6, the entire area would be converted to Recommended LUD II. Although LUD II designation would not expand the Misty Fjords National Monument Wilderness as such, it would provide for long-term management in a mostly natural condition. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. No timber harvest would be allowed. Planning for access between Canada and Southeast Alaska could continue. The values associated with the natural settings of the roadless area would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness providing long-term protection of the wilderness related values of the area, and extend the Misty Fjords National Monument Wilderness to the north. No timber harvest would be allowed. The ongoing recreation, minerals, and special uses programs could be restricted. Planning for access between Canada and Southeast Alaska may not be allowed. Mineral

## Appendix C

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.

<b>Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 208 (in acres)</b>								
<b>Land Use Designation</b>	<b>Alt 1</b>	<b>Alt 2</b>	<b>Alt 3</b>	<b>Alt 4</b>	<b>Alt 5</b>	<b>Alt 6</b>	<b>Alt 7</b>	<b>Alt 8</b>
Recommended Wilderness								204,133
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation	27,505	27,505	27,505	27,505	27,505		27,505	
Enacted Municipal Watershed								
Old-growth Habitat	13,772	13,772	13,772	13,772	13,772		13,772	
Semi-remote Recreation	43,481	43,481	43,481	43,481	43,481		43,481	
Recommended LUD II						204,133		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber Production	119,375	119,375	119,375	119,375	119,375		119,375	
<b>TOTAL</b>	<b>204,133</b>	<b>204,133</b>	<b>204,133</b>	<b>204,133</b>	<b>204,133</b>	<b>204,133</b>	<b>204,133</b>	<b>204,133</b>
Suitable Timber Lands	1,999	1,999	1,999	1,999	1,999	0	1,999	0