

Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: West Zarembo (235)

ACRES (NFS): 8,544

BIOGEOGRAPHIC PROVINCE: Etolin Island and Vicinity

ECOLOGICAL SECTION: Kupreanof Lowlands

2003 WILDERNESS ATTRIBUTE RATING: 14

I. Overview and Description

(1) **Location and Access:** The West Zarembo Roadless Area is located on the west side of Zarembo Island. It is approximately 5 miles southeast of Kupreanof Island and 25 miles west of the town of Wrangell. Wrangell is served by the Alaska Marine Highway and jet service. Clarence Strait lies to the southwest, Sumner Strait lies to the west and northwest, and the remainder of the area is bounded by roaded areas on Zarembo Island. Access is by boat or floatplane to Zarembo Island, then by traveling cross-country on foot or by using the road system to access the roadless area. The interior is also accessible by helicopter. There are no sites suitable for landing wheeled aircraft. The road system on Zarembo Island accesses many portions of the roadless area.

(2) **History:** Zarembo Island was used by the Stikine Tlingit clans for hunting and gathering of subsistence items. Their use is evidenced by several fish weirs and petroglyph sites along the west coast of the island. Historic use is evidenced by the remains of a log cabin. A narrow strip along the shoreline of the roadless area has been harvested extensively by beach logging, most of which occurred in the 1960s and early 1970s.

(3) **Geography and Topography:** The area is generally flat and slightly rolling. Two streams drain the area, and there are small freshwater lakes in the area. The flat muskegs rise to the east to timbered hillsides of elevations of about 1,000 feet. The area contains 14 miles of saltwater shoreline and 2 acres of small islands. There are no ice, alpine, or rock features mapped in the area.

(4) **Ecosystem:**

(a) **Classification:** Biogeographic Province. The area is in the Etolin Island and Vicinity Biogeographic Province. This province is characterized by rolling, subdued topography, and extensive muskeg areas, but may have localized, rugged terrain. There are no known areas of unique or uncommon plant/soils associations or geologic formations in the area.

Ecological Section/Subsection. The West Zarembo Roadless Area is contained entirely within the Kupreanof Lowlands Ecological Section (M247G), represented by two ecological subsections (see table below). The Sumner Strait Volcanics Ecological Subsection represents the vast majority of the West Zarembo Roadless Area. Water-resistant volcanic flows of relatively recent origin arise from lowland glacial deposits. The interplay of volcanic and glacial forces have left a landscape of shallow organic soils on long, gentle slopes and mineral soils on short, steep slopes. Productive hemlock, Alaska yellow cedar, and spruce forests are found on the steep slopes (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kupreanof Lowlands	Sumner Strait Volcanics	99%
	Duncan Canal Till Lowlands	1%

(b) **Soils:** Soils in this area are formed in a wide variety of parent materials, including bedrock and glacial drift. In general, well- or moderately-well-drained soils are on moderate to steep mountain slopes

with permeable parent materials. These soils are acidic, have cold soil temperatures, and are very high in organic matter. Rooting is largely limited to the surface organic layers and the top few inches of mineral soil. These soils are usually moist, sometimes wet, but are never dry.

Poorly-drained soils developed on less-sloping areas and/or areas with impermeable soil materials. These soils have deep accumulations of organic matter and range from scrubby forested wetlands to open muskeg. No alpine soils are present.

(c) Vegetation: Vegetation of this roadless area primarily consists of typical spruce/hemlock forests. Low-lying, poorly-drained portions of the area are muskeg. Approximately 103 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult.

There are approximately 8,317 acres mapped as forest land of which 3,930 acres (47 percent) are mapped as productive old-growth forest. Of the productive old growth, approximately 438 acres or 11 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 78 acres of high-volume, coarse-canopy old growth. There are approximately 231 acres of second-growth forest where beach timber harvest has occurred.

(d) Fish Resources: There are 10 short Class I streams in this roadless area. These streams most likely contain pink and coho salmon, as well as steelhead.

(e) Wildlife Resources: A large population of Sitka black-tailed deer range over the roadless area. Other wildlife species common to Zarembo Island include wolf, black bear, moose, elk, beavers, river otters, Canada goose, marbled murrelets, goshawks, osprey and bald eagles. Brown bear and mountain goats do not occur on the island.

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

LUD	Acres
Timber Production	464
Old-growth Habitat	8,078
Semi-remote Recreation	2

Approximately 5 percent of the roadless area was allocated to one development LUD, Timber Production. This LUD is primarily located along the east boundary of the roadless area.

Most of this roadless area, 95 percent, is allocated to a non-development LUD (Old-growth Habitat, Semi-remote Recreation). The Old-growth Habitat LUD was assigned to approximately 95 percent of the roadless area. Less than 1 percent of the roadless area was allocated to the Semi-remote Recreation LUD, located on small islands off the coast of the area.

There are no developed recreation sites, nor is there frequent use of the area by local guides or outfitters. There is some subsistence use, especially in the more accessible portions of the roadless area. Salvage logging has occurred along the shoreline.

The current Tongass National Forest 10-year action plan schedules the Baht timber sale for part of this area in 2005-2006.

(6) Appearance (Apparent Naturalness): The area appears unmodified; however, older beach logging and adjacent development in upland areas have affected parts of the area's natural appearance to some extent.

(7) Surroundings (External Influences): The roadless area is on Zarembo Island, which is an area of development primarily for timber management activities, and includes a road network. Clarence Strait lies to the

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southwest, Sumner Strait lies to the west and northwest, most of the area to the southeast is in an old-growth reserve, and most of the area to the east and northeast is allocated for timber management. Timber harvest areas, roads, and reforested plantations are adjacent to the roadless area on the east side. When harvesting activities occur adjacent to or near the roadless area, the sights and sounds may create an affect. Boats plying the adjacent saltwater may be visible from within parts of the roadless area but usually are not intrusive. Low-flying aircraft may temporarily distract visitors in the area.

(8) Attractions and Features of Special Interest: The scenery of the area is typical of much of the lowlands of Southeast Alaska. The area contains four inventoried recreation places, which cover 2,353 acres (28 percent) of the roadless area. There are no areas of special interest.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: There have been refinements to the boundary of the roadless area where it occurs along developed areas. The roadless area has been extended north and now includes Point St. John and area along the shore north to the inlet where beach logging has been done in the past.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is generally unmodified. Development activities outside of the roadless area, but within the higher reaches of area watersheds, may have altered some of the natural processes. The area is bounded on one side by land managed for timber. The other side is primarily beachfront, some of which has been beach logged in the past (1960s).

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: There is a low opportunity for solitude within the area. Low-flying airplanes and recreational boaters may at times pass nearby and be observed by people in this roadless area. The character of the landforms generally allows the visitor to feel remote from the sights and sounds of human activity. The area is accessible by boat from the community of Petersburg in about 3 hours and from Wrangell in approximately 2 hours. Present recreation use levels are low. Generally, a person camped or traveling inland is unlikely to see others. Periodic timber harvest activities in the adjacent areas would have a significant impact on the opportunity for solitude.

Travel within the area is not particularly challenging, requiring only moderate woods skills and experience. The majority of the area is within 3 miles of a road. The presence of black bears adds to the challenge and needs for woods skills.

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

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	5,842	68%
Roaded Modified (RM)	2,702	32%

The area contains four inventoried recreation places, which cover 2,353 acres (28 percent) of the roadless area.

ROS Class	# of Rec. Places	Total Acres
SPNM	0	0
RM	4	2,353

There are no developed recreation opportunities in the area.

(3) Wilderness Attribute Rating System: In 1977, the Forest Service, along with public interest groups, developed the Wilderness Attribute Rating System (WARS), which was used to inventory the wilderness characteristics of roadless areas during the second Roadless Area Review and Evaluation process (referred to as RARE II). The purpose of WARS was to provide a measure of the area's wilderness quality, based on the key

attributes of wilderness as defined in the Wilderness Act. It is largely based on the attributes described above in items 1 and 2 of this section (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

The inventoried roadless areas of the Tongass National Forest were rated according to this system in 1989 for the Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the West Zarembo Roadless Area was given a rating of 19 out of 28 possible points. The rating was re-evaluated for this updated version of the Analysis of the Management Situation. Based on this re-evaluation, the area was given a rating of 14. This rating reflects the developments adjacent to the area and their effects on wilderness attributes.

(4) Ecologic and Geologic Values:

(a) Fish Resources: Neither of the VCUs are listed as primary producers of salmon or sport fish by the Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998).

There are 10 short Class I streams in this roadless area. These streams most likely contain pink and coho salmon as well as steelhead.

(b) Wildlife Resources: The area supports a large population of Sitka black-tailed deer. Elk have recently colonized the island, but populations are low. Also, wolves, black bear, moose, and other wildlife species use the area. Other wildlife species common to Zarembo Island include beaver, river otters, Canada geese, marbled murrelets, goshawks, osprey and bald eagles. Brown bear and mountain goats do not occur in this area.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened and endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Four Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, osprey, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along major rivers and winter in ice-free areas throughout the Tongass. Present from April through September, ospreys are rare in Southeast Alaska where they reach the northern extent of their nesting range. Feeding almost exclusively on fish, ospreys typically nest in large snags near lakes or the coast where fish are abundant. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, eight sensitive plant species are known or suspected to occur in the Wrangell Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There do not appear to be any carbonate rock formations in the area, which are a necessary requirement for Karst. There are no glaciers or unique geologic features in this area.

(5) Scientific and Educational Values: There are opportunities to study wildlife, ecology, and the forces and processes that form the topography of the area.

(6) Scenic Values: The area generally appears unmodified from saltwater; however, adjacent timber harvest units have affected the natural appearance of adjacent roadless areas. The visual character type of this area is Kupreanof Lowland, characterized by islands of rolling terrain exhibiting gradual relief separated by an intricate network of waterways. Numerous small rocky islands, shorelines and rock reefs are evident from Sumner Strait.

Visual Priority Routes and Use Areas identified by the Forest Plan, that are within or adjacent to the area include Sumner Strait, a tour ship route.

About 11 percent of the area was inventoried as Variety Class B (possessing landscape diversity that is common for the character type). The majority of the area, 88 percent, was inventoried as Variety Class C (possessing a low degree of landscape diversity).

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The majority of the roadless area, 75 percent, is inventoried as Existing Visual Condition (EVC) Type I, where the landscape appears to be untouched by human activity. Seventeen percent of the area is inventoried as EVC IV, in which changes to the landscape are easily noticed by the average person. About 8 percent is inventoried as EVC V, where changes to the landscape are obvious to the average visitor and appear to be major disturbances.

(7) **Social, Cultural, and Historical Values:** Zarembo Island was used by all of the Stikine Tlingit clans for hunting and gathering of subsistence items. Their use of western Zarembo Island is indicated by the reported remains of several fish weirs and petroglyphs. Historic use is evidenced by the remains of a log cabin. There has been some salvage and beach logging along the shore. The area is used for subsistence hunting and gathering by the people of Wrangell (25 miles by boat) and, to a lesser extent, by residents of Petersburg (30 miles by boat), especially in the more accessible portions of the roadless area. The VCUs of the area were not listed among the VCUs with the highest community use values. However, they were listed in the second tier of high value VCUs and were listed among the VCUs with the highest sensitivity to disturbance of subsistence areas (ADF&G, 1998).

(8) **Manageability as Wilderness and Boundary Conditions/Changes:** The area is bounded on one side by land managed for timber. The other side is primarily beachfront, some of which has been logged in the past. Feasibility of managing the area as a wilderness is affected by its narrowness (most of it is within 3 miles of a road) and the fact that the upper reaches of most of its watersheds are developed.

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

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

(2) **Subsistence Uses:** The existing patterns of subsistence activities in the area would generally not be affected by wilderness designation or management in an unroaded condition. Limited motorized use of the road system occurs by Wrangell residents; however, the road system is outside the current roadless area boundary. Subsistence users, commenting on the proposed Skipping Cow Timber Sale on the southern portion of Zarembo Island, were divided on whether maintaining the area in a roadless condition or building roads and harvesting timber would improve or harm subsistence use.

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

(4) **Wildlife Resources:** There are some wildlife habitat enhancement projects planned for this area, including thinning of previously harvested areas in the beach fringe.

(5) **Timber Resources:** There are approximately 3,930 acres mapped as productive old growth in the roadless area. In addition, 231 acres of second growth have resulted from beach logging. Of this area, there are 2,623 acres inventoried as tentatively suitable for harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 68 acres or less than 1 percent of this roadless area are estimated to be suitable for timber production. Approximately 21 of the suitable acres are mapped as high-volume old growth; none of the acres are mapped as high-volume, coarse-canopy old growth.

The potential for managing timber in this roadless area is dependent on high market values. A road system is already present nearby and could be extended into parts of this area. Two sites for transferring logs to saltwater are already present on Zarembo Island. The current Tongass National Forest 10-year action plan schedules the Baht timber sale for this area in 2005-2006.

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

(7) **Minerals:** The roadless area contains an estimated 8,544 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have low potential for development.

(8) **Transportation and Utilities:** A road system is already present nearby and could be extended into this area. Two sites for transferring logs to saltwater are already present; St. John Harbor and Roosevelt Harbor. No utility corridors are planned within the roadless area.

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

(10) **Areas of Scientific Interest:** The area does not contain any Research Natural Areas and has not been identified for any other scientific value.

(11) **Land Use Authorizations:** There are no special uses in the area, except for a Coast Guard lighthouse reservation.

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

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) **Interest Expressed by Local Users and Residents:** Some Wrangell residents generally favor road building and timber harvest, but there is also some interest in maintaining the area in an unroaded condition. Most use of the area is recreational, and occurs along the beach fringe or near the existing road system.

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

(c) **Public Input During Forest Plan Revision and Appeals:** Comments received from the timber industry favored managing all of Zarembo Island in Timber Production to allow for a sustainable, economic timber sale program. Specific comments recommended continued roadless status for Roadless Area 237 (South Zarembo), but no roadless recommendations were made for this area.

(d) **Public Input During Roadless Area Conservation Rule and Road Management Policy Review:** No specific comments were received for this area from the public during the Roadless Area Conservation Rule process or during the Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development.

(e) **Public Input Expressed for Project-level EISs and Other Input:** No specific comments were received on this area.

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

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 235 for permanent protection as LUD II. SEACC recommended the remaining unlogged portions of Woronkofski, Zarembo, and North Etolin Islands be safeguarded through LUD II protection.

(2) **Nearby Roadless and Wilderness Areas and Uses:** Two other roadless areas exist on Zarembo Island—East Zarembo Roadless Area and South Zarembo Roadless Area. These roadless areas are all separated from each other by areas developed for timber management. Recreational use is light in all of the roadless areas on Zarembo Island, although subsistence deer hunting occurs.

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

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	80	90
Wrangell (Pop. 2,308)	25	30
Petersburg (Pop. 3,224)	25	30
Juneau (Pop. 30,711)	140	150

Petersburg and Wrangell are the nearest stops on the Alaska Marine Highway.

(4) Relative Contribution to the National Wilderness Preservation System: The West Zarembo Roadless Area is located on the west side of Zarembo Island. It is 5 miles southeast of Kupreanof Island and 25 miles west of the town of Wrangell. Clarence Strait lies to the southwest, Sumner Strait lies to the west and northwest, and the remainder of the area is bounded by roaded areas on Zarembo Island. The area is generally flat and slightly rolling. Two streams drain the area, and small freshwater lakes account for about 100 acres. The flat muskegs rise to the east to timbered hillsides of elevations of about 1,000 feet.

The area is mostly natural appearing; however, it is heavily influenced by developments on the east side of the roadless area. The natural integrity and apparent naturalness is moderate. The opportunity for solitude and primitive recreation is low in the area.

None of the area is rated as distinctive for the character type from a scenery perspective.

There are introduced elk on the island, which is unique to Southeast Alaska, but not valuable for wilderness. There are no other known significant or unique features in the area.

The roadless area includes about 438 acres of high-volume, old-growth forest. Of these acres, 78 are mapped as high-volume, coarse-canopy old growth.

The West Zarembo Roadless Area is classified as being in the Etolin Island and Vicinity Biogeographic Province and makes about 2 percent of the province. It is one of 14 inventoried roadless areas found within the province that collectively make up about 54 percent of the province. The South Etolin Wilderness is located in this province and makes up about 16 percent of the province.

The West Zarembo Roadless Area lies completely within the Kupreanof Lowlands Ecological Section and represents 1 percent of the ecological section. Approximately 1 percent of the Kupreanof Lowlands Ecological Section is in existing wilderness, 1 percent is in existing LUD II, and an additional 33 percent is protected by other existing non-development LUDs.

The vast majority (99 percent) of the roadless area is in the Sumner Strait Volcanics Ecological Subsection; this portion of the roadless area represents 2 percent of the entire ecological subsection, minor portions of which are protected by existing wilderness and LUD II (0.1 percent and 1 percent, respectively) and by other existing non-development LUDs (32 percent). The balance (1 percent) of the roadless area is in the Duncan Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents less than 0.1 percent of the entire ecological subsection, of which, 5 percent is protected in existing wilderness and 35 percent in other existing non-development LUDs.

The West Zarembo Roadless Area was rated 14 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 107th from the highest (along with two other roadless areas) among the 109 Tongass inventoried roadless areas.

There is some support for managing this roadless area in an unroaded condition, but very little support for designating it as wilderness. Designation would create a wilderness with few unique or significant attributes and that is heavily influenced by adjacent developed areas. However, designation of the area would add Congressional protection to approximately 2 percent of the Sumner Strait Volcanics Ecological Subsection that is not currently

represented in wilderness or LUD II. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be very low.

V. Environmental Consequences

The West Zarembo Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 95 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 5 percent. The land in the development LUDs provides an estimated 68 acres that are suitable for timber production (less than 1 percent of the suitable acres on the Wrangell Ranger District). None of the suitable acres are high-volume, coarse-canopy old growth. The roadless area contains an estimated 8,544 acres of undiscovered locatable mineral resources; all of the acres are considered to have low potential for development. The timber sales, recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area could be affected by ongoing developments, however most of the area is managed for old growth habitat under the Forest Plan.

Under Alternative 6, the entire area would be converted to Recommended LUD II. The ongoing recreation, minerals, and special use programs would continue similar to current conditions. No timber harvest would be allowed. Designation of the area as LUD II would add Congressional protection to approximately 2 percent of the Sumner Strait Volcanics Ecological Subsection that is not currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the ongoing recreation, minerals, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area as wilderness would add Congressional protection to approximately 2 percent of the Sumner Strait Volcanics Ecological Subsection that is not currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 235 (in acres)								
Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								8,544
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	8,078	8,078	8,078	8,078	8,078		8,078	
Semi-remote Recreation	2	2	2	2	2		2	
Recommended LUD II						8,544		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed								
Modified Landscape								
Timber Production	464	464	464	464	464		464	
TOTAL	8,544	8,544	8,544	8,544	8,544	8,544	8,544	8,544
Suitable Timber Lands	68	68	68	68	68	0	68	0