

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Keku (239)

ACRES (NFS): 11,170

BIOGEOGRAPHIC PROVINCE: Kuiu Island

ECOLOGICAL SECTION: Kupreanof Lowlands and Kuiu-Prince of Wales Fjordlands

2003 WILDERNESS ATTRIBUTE RATING: 19

I. Overview and Description

(1) **Location and Access:** The Keku Roadless Area is located on the northern end of Kuiu Island and the nearby Keku Islands. It lies east of Saginaw Bay, west of Keku Strait, and south of Frederick Sound. Roaded lands lie to the south. There is also a small, roaded area along Saginaw Bay, just southeast of Halleck Harbor. The roadless area is accessed primarily by saltwater via boat or floatplane. It is approximately 7 air miles across Keku Strait from Kake and 40 air miles from Petersburg. Petersburg and Kake are served by the Alaska Marine Highway and Petersburg has daily jet service.

Several good anchorages are located in Saginaw Bay, Halleck Harbor, and Keku Strait. There are no sites suitable for landing wheeled aircraft. Access to the interior is by foot or helicopter. There is no ferry service to Kuiu Island. The nearest ferry service is at Kake.

(2) **History:** Keku Strait and the surrounding area is in the traditional territory of the Kake Tlingit. There is a rich assortment of cultural resources, including the remains of villages, temporary camps, cave shelters, fish weirs, burial sites, pictographs, petroglyphs, and garden sites. A historic cannery was located in Saginaw Bay, and there are several fur farms and temporary camps on the Keku Islets.

This area was a contingency area of the Alaska Pulp Corporation Long-term Timber Sale Contract. A logging camp was developed at Saginaw Bay and nearby Rowan Bay and used intermittently during timber harvest activities. Road development has occurred to the south, along the head of Saginaw Bay. Forest Road 6415 connects Rowan Bay to Security Bay and Saginaw Bay, and is used as a major route for hauling logs to the transport facility in Rowan Bay. There is also a small, roaded area along Saginaw Bay, just southeast of Halleck Harbor. Timber harvest has occurred in both of these roaded areas. Beach logging took place along the northeast shore and on two of the Keku Islands.

(3) **Geography and Topography:** The landforms in this area are generally low lying in relief. The Keku Islets are distinctive, and scattered along the shoreline to the northwest for a distance of approximately 4 miles. The landscape is typical of glaciated volcanic terrain, characterized by gently-sloping to moderately steep hills that are abruptly broken to reveal prominent cliffs. Bedrock lithology is dominated by extrusive igneous rocks, with some carbonate formations. The elevation ranges from sea level to less than 1,000 feet. The cliffs generally parallel each other, and are oriented in a northwest-southeast direction. Southeast-facing slopes are long and relatively gentle, while northwest facing slopes are typically steep and benched with cliff faces. The area is almost entirely covered with spruce-hemlock vegetation. Muskeg openings tend to be small and uniform in distribution. Gill Lake, located along the southern boundary of the area, is relatively large, and with several other smaller lakes, total approximately 85 acres of freshwater lakes for this area. The area contains 72 miles of saltwater shoreline. Offshore islands total 1,690 acres, six of which are over 50 acres. There are about 13 acres of rock within this area and no mapped alpine or ice features.

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(4) Ecosystem:

(a) **Classification:** Biogeographic Province. The area is in the Kuiu Island Biogeographic Province. This province is generally characterized by rolling, subdued topography and extensive muskeg areas, but may have localized, rugged terrain. Bedrock lithology is dominated by extrusive igneous rocks, but a portion of the area (generally from Saginaw Bay south to Kadake Bay) consists of carbonate rock with some karst features adjacent to the roaded area in the southwest. The climate in this biogeographic province is cooler, and winter snow pack is greater, than on islands to the south but milder than the mainland. The west portion is subject to severe windstorms. Stream density is relatively low (2.6 mi or 1,000 acres). In areas of volcanoclastic bedrock, actively eroding gullies (V-notches) are prominent and contribute a large amount of bed load sediments.

Ecological Section/Subsection. The Keku Roadless Area is contained mostly within the Kupreanof Lowlands Ecological Section (M247G) and also contains portions within the Kuiu-Prince of Wales Fjordlands Ecological Section (M247F). These areas are represented by two ecological subsections (see table below). The Kake Volcanics Ecological Subsection covers approximately two-thirds of the Keku Roadless Area and contains gently rolling hills of glacially reduced sedimentary and volcanic rock, usually below 1,000 feet elevation. Productive hemlock and spruce forests are found on the slopes. The remainder of the Keku Roadless Area, about one-third, lies within the North Prince of Wales-Kuiu Carbonates Ecological Subsection, composed of limestone and marble karstlands. Karstlands contain a variety of unique features including conical pits, shafts, cliffs, caves, and networks of groundwater channels resulting from the weathering of karst. Hemlock and hemlock-spruce forests are found on karst soils which can be highly productive (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kupreanof Lowlands	Kake Volcanics	68%
Kuiu-Prince of Wales Fjordlands	North Prince of Wales- Kuiu Carbonates	32%

(b) **Soils:** Soils are generally shallow to moderately deep and well-drained on forested hill slopes. Extensive areas of poorly-drained mineral soils and organic soils occur between hills and on the more gently-sloping southeast-facing hill slopes. Well-drained to somewhat poorly-drained soils developed on the foot slope below the limestone cliffs within Saginaw Bay. Areas of muskeg soils occupy nearly level positions along the ridgetops and in the valleys.

(c) **Vegetation:** Muskeg/forested wetland timber complexes are interspersed with mixed conifer plant communities on better-drained sites. Approximately 115 acres of muskeg are mapped for the area, however due to their small size and association with forested sites, accurate acreage estimates are difficult. Timbered hill slopes are dominated by western hemlock and western hemlock/Alaska yellow-cedar plant communities. Subalpine ecosystems occupy about 5 percent of the area. About 50 percent of the area is classified as wetland.

There are approximately 10,605 acres mapped as forest land, of which 6,246 acres or 59 percent are mapped as productive old-growth forest. Of the productive old growth, approximately 2,761 acres or 44 percent are mapped as high-volume, old-growth forest. The productive old growth includes about 480 acres of high-volume, coarse-canopy old growth. There are approximately 272 acres of second-growth forest where beach timber harvest has occurred.

(d) **Fish Resources:** Three Alaska Department of Fish and Game (ADF&G) numbered salmon producing streams are present. These are not large producers and although no escapement data are available, coho salmon and Dolly Varden char are present.

(e) **Wildlife Resources:** Sitka black-tailed deer, moose, beaver, river otter, marten, wolves, and black bear inhabit this roadless area. Black bears are especially abundant on the north end of Kuiu Island. Other terrestrial mammals include bats, mink, muskrat, ermine, red squirrel, mice, shrews, and voles. There are

occasional sightings of fisher and wolverine, but these are considered incidental species at the edge of their range.

Large flocks of ducks and geese pass this area during their spring and fall migrations through Keku Strait. Other bird species include bald eagles, red-tailed hawks, sharp-shinned hawks, great horned owls, western screech owls, saw-whet owls, pigmy owls, marbled murrelets, osprey, spruce grouse, ptarmigan, sandhill cranes, trumpeter swans, and great blue herons. Red-throated, Pacific, and common loon all occur around Kuiu Island. Several plover, yellowlegs, and sandpiper species occur mainly along the river corridors and in large muskeg systems. Two swift species, one hummingbird species, four woodpecker species, three flycatcher species, and five swallow species are also known on the island. Steller’s jay, northwestern crow, and common raven all occur. Chestnut-backed chickadee, red-breasted nuthatch, brown creeper, winter wren, American dipper, golden-crowned kinglet, ruby-crowned kinglet, Swainson’s thrush, and hermit thrush occur. American robin, varied thrush, American pipit, cedar waxwing, northern shrike, warbling vireo, and five warbler species occur. Additionally, the northern water thrush, common yellow throat, western tanager, dark-eyed junco, Lapland longspur, snow bunting, red-winged blackbird, rusty blackbird, brown-headed cowbird, eight sparrow species, pine grosbeak, red crossbill, white-winged crossbill, common redpoll, and pine siskin are found.

Sea mammals known to inhabit the waters surrounding Kuiu Island are the Pacific white-sided dolphin, killer whale, harbor porpoise, Dall’s porpoise, humpback whale, Steller sea lion, and harbor seal. Sea otters occur in the western areas of Sumner Strait off southern Kupreanof Island and on both eastern and western shores of Kuiu Island. They are expanding their range northward into Keku Strait.

Amphibians known to occur on Kuiu Island include rough-skinned newt, western toad, and wood frog. The rough-skinned newt is found primarily in lacustrine, palustrine, hemlock/spruce forests, and muskeg bog ecosystems. The western toad is also found primarily in lacustrine, palustrine, hemlock/spruce forests, and in clearcuts. Wood frogs are found in most of the ecosystems found in Southeast Alaska except for marine, estuarine, and riverine.

(5) Management Direction and Current Uses: The roadless area was allocated to five Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These five LUDs are Timber Production, Scenic Viewshed, Old-growth Habitat, Special Interest Area, and Semi-remote Recreation.

LUD	Acres
Timber Production	6,543
Scenic Viewshed	1,564
Old-growth Habitat	1,899
Special Interest Area	1,120
Semi-remote Recreation	43

The majority of the roadless area, approximately 73 percent, was allocated to development LUDs (Timber Production, Scenic Viewshed). Most of the roadless area, 59 percent, was allocated to the Timber Production LUD. Approximately 14 percent of the roadless area was allocated to the Scenic Viewshed LUD. The peninsula tip of the roadless area and the Keku Islands were allocated to this LUD.

Approximately 27 percent of the roadless area was allocated to non-development LUDs (Old-growth Habitat, Special Interest Area, Semi-remote Recreation). The Old-growth Habitat LUD was assigned to approximately 17 percent of the roadless area. Around Halleck Harbor, approximately 10 percent of the roadless area was allocated to the Special Interest Area LUD. This area, the Keku Islets Special Interest Area, is noted for its geologic, scenic, and cultural values. Lands managed under this designation have unique features and are protected for public use, study, and enjoyment of these natural areas (Forest Plan FEIS, Appendix F, Volume 2, F-4). Less than 1 percent of the roadless area was allocated to the Semi-remote Recreation LUD, which is located on the smaller islands off the coast.

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Logging operations on Kuiu Island currently center on Rowan Bay. The road systems of Rowan and Saginaw were connected in 1976, and traverse the area. No timber harvest activities have been planned for the area at this time but parts of this area may be included in sales in the 10-year sale schedule.

The Bureau of Land Management manages a 5-acre parcel of land near Saginaw Bay. Several aboriginal sites have been conveyed to Sealaska Corporation and are managed to protect the cultural resources on the sites. Another 1,630 acres have been conveyed to Sealaska Corporation and 400 acres have been conveyed to Kake Tribal Corporation.

Recreation uses include bear, deer, and moose hunting; sea kayaking; beachcombing; camping; marine wildlife viewing; and gathering forest products. Non-resident sport hunters harvested 120 black bears from Kuiu Island in 2000. The area is popular for black bear subsistence hunting. Lack of cabins or commercial overnight facilities limits use by fly-in recreationists but good anchorages provide good boat camping. Five outfitter/guides used the roadless area in 2000 for a total of 636 service days.

(6) Appearance (Apparent Naturalness): Most of the area appears unmodified. Exceptions exist near the old cannery and the former logging camp sites, along shorelines where beach logging occurred, and in those portions of the roadless area that are adjacent to logged areas.

(7) Surroundings (External Influences): Keku Strait and Saginaw Bay border this area on three sides. Management activities have been continuing along the head of Saginaw Bay, where road construction and timber harvesting have been extensive. Forest Road 6415, which connects Rowan Bay to Security and Saginaw Bays, will likely continue to serve as a major access route for hauling logs. Modifications on lands adjacent to this route will continue to occur under current management direction as the area is allocated for timber management. Logging on adjacent islands has affected the setting of adjacent roadless islands, as well as the area as a whole. The Bureau of Land Management manages a 5-acre parcel of land near Saginaw Bay. Several aboriginal sites have been conveyed to Sealaska Corporation and are managed to protect the cultural resources on the sites. Another 1,630 acres have been conveyed to Sealaska Corporation and 400 acres have been conveyed to Kake Tribal Corporation.

(8) Attractions and Features of Special Interest: Several historical and aboriginal sites attract visitors to the area. Keku Islets Special Interest Area has numerous cultural sites and limestone formations, as well as plant and animal fossils. Beachcombing is also popular in this area. The area contains five inventoried recreation places, which cover 858 acres, or 8 percent of the roadless area. There are no developed trails. The presence of good anchorage sites in Saginaw Bay and Halleck Harbor allow visitors to "boat camp" overnight. Sport fishing for king salmon is considered good. The surrounding waters are good for whale watching.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The northern tip of the peninsula, the Fossil Bluffs area, was added to the roadless area since the 1989 analysis. Other small additions include portions of the Keku Islands that had not been included in the 1989 roadless area, and areas along the shore with harvest units but no roads. Areas roaded and harvested in the southwest and areas that are no longer National Forest System lands (in the central part) have been dropped from the roadless area. Changes in landownership have also reduced the size of the area.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: Most of the area is unmodified (89 percent). However, evidence of past occupancy (the cannery site), beach logging, and other logging and roading has somewhat fragmented this roadless area. The timber harvest activity, which is readily apparent in and around the roadless area, decreases the appropriateness of the Keku Roadless Area for wilderness classification. The removal of areas that have been roaded and harvested from the roadless area and the conveyance of lands to the Sealaska Corporation and the Kake Tribal Corporation have nearly divided the roadless area into three subsections connected by narrow, unroaded areas.

(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation: Generally, there is a moderate opportunity for solitude in the Keku Roadless Area. In places, the area is less than 0.2 mile wide and averages less than 2 miles across. Management activities along the road to Saginaw Bay will adversely affect solitude when these activities occur. Use of floatplanes and motorboats

may disrupt visitors for brief periods. Present recreation use levels are low. People camped along the shore are generally unlikely to encounter other recreationists, but they might be seen by or may be able to see an occasional fishing boat offshore or recreational boat.

Travel within the roadless area is moderately challenging. Much of the area contains gently sloping topography but there are also steep limestone cliffs that require climbing skills to cross. As with all backcountry areas on the Tongass, the opportunity for challenge and risk in this area is high. The climate, the rugged terrain, the isolation and distance from population centers with medical facilities, the barriers to communication, and the presence of large wild animals all contribute to the need for good preparation and knowledge of backcountry survival skills for anyone using this area. Hypothermia and bear encounters are just two examples of the many risks that must be considered before traveling in the backcountry of Southeast Alaska.

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

ROS Class	Acres	Percent of Total ROS
Semi-Primitive Non-Motorized (SPNM)	4,762	43%
Semi-Primitive Motorized (SPM)	4,696	42%
Roaded Modified (RM)	1,712	15%

The area contains five inventoried recreation places, which cover 858 acres, or 8 percent of the roadless area.

ROS Class	# of Rec. Places	Total Acres
SPNM	0	0
SPM	2	415
RM	4	443

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

No developed recreation opportunities are available. Five outfitter/guides used the roadless area in 2000, for a total of 636 service days.

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

The inventoried roadless areas of the Tongass National Forest were rated according to this system in 1989 for the original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the Keku Roadless Area was given a rating of 22 out of 28 possible points. The rating was re-evaluated for this updated version of the Analysis of the Management Situation. Based on this re-evaluation, the area was given a rating of 19. This rating reflects the effects of adjacent developments and activities on the wilderness attributes of this area. The relatively small size of the area contributes to the effects.

(4) Ecologic and Geologic Values: The roadless area contains carbonate rock formations, including some karst and caves. The area around Halleck Harbor is designated as Keku Islets Special Interest Area, partly because of the karst, as well as cultural and scenic values. Much of the area is low-volume forest. Most of what little high-volume old growth that does occur is in the eastern side of the roadless area, on the carbonate rock formations.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) lists VCU 399 along Saginaw Bay as a primary salmon producer and no VCUs as primary sport fish producers. The other VCU, 398 along Keku Strait, is listed as a secondary producer of salmon.

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(b) Wildlife Resources: Sitka black-tailed deer, moose, wolves, and black bear inhabit this roadless area. The north end of Kuiu Island has an especially high black bear population. Based on data compiled from 1985 to 1994, VCU 399 along Saginaw Bay, is listed among the top 25 percent of VCUs for black bear harvest (ADF&G, 1998). Deer winter habitat is generally found on southern aspects at low to moderate elevations in multi-canopied forests. Most of the area consists of low value deer winter habitat. Information from the Crane and Rowan Mountain Timber Sales EIS (USDA Forest Services, 1998) indicates that this area also supports habitat for otter, mink, marten, bald eagle, goshawk, trumpeter swan, and Canada goose. American peregrine falcons pass through the area during spring and fall migrations. Humpback whales inhabit marine waters near the area.

(c) Threatened, Endangered, and Sensitive Species: The only federally listed threatened or endangered species likely to occur within or adjacent to the roadless area are the humpback whale (endangered) and the Steller sea lion (threatened). Both of these species are found in adjacent marine waters. Three Forest Service Region 10 Sensitive Species are suspected or known to occur within the area: the trumpeter swan, Peale's peregrine falcon, and the Queen Charlotte goshawk. Trumpeter swans nest in the lowlands on small lakes and along large rivers, and winter in ice-free areas throughout the Tongass. Peale's peregrine falcons nest on cliff faces and islands and feed primarily on seabirds. Inhabitants of late seral forests, Queen Charlotte goshawks are closely associated with productive old growth. In addition, 12 sensitive plant species are known or suspected to occur in the Petersburg Ranger District.

(d) Karst, Cave, and Other Geologic Resources: Keku Islets Special Interest Area has numerous and unusual limestone formations including small caves, arches, stocks, and cliffs, as well as plant and animal fossils. A portion of this roadless area is underlain by limestone or marble, and karst and cave resources are known to have developed there. The limestones and marbles found here are commonly the ridge forming rock types. Extensive karst systems are known from the intensity and numbers of features found described from the limited inventory and air photo interpretations. Paleontological discoveries are likely, as well as archaeological finds. Because of the thickness of the limestone and marble in this area, vertical pits and cave systems of record depth are possible. Extensive areas of limestone and marble are exposed from sea level to the ridge tops in these glaciated valleys. The karst systems found here extend from the alpine or higher elevations to the sea, providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. Approximately 2,300 acres, 21 percent of the roadless area, are mapped as low vulnerability karst resources.

(5) Scientific and Educational Values: Keku Islets Special Interest Area is a geologically interesting with its unusual limestone formations, as well as plant and animal fossils. It also has numerous cultural sites. The fossil beds, karst formations, and caves may be of scientific and educational value. The area contains cultural resources that would be beneficial in interpreting the history and prehistory of the area to visitors.

(6) Scenic Values: Most of the area is natural appearing with gently-sloping to moderately-steep hills that are abruptly broken by prominent limestone cliffs. Roading and timber harvesting activity is prominent at the head of Saginaw Bay and in the adjacent roaded areas along Saginaw Bay. The natural condition of the Keku Islands are visible from the Keku Strait and Frederick Sound. Keku Islets Special Interest Area is valued for its scenic beauty in addition to its geological formations.

Visual Priority Routes and Use Areas identified by the Forest Plan that are within or adjacent to the area include Keku Strait, a tour ship and small boat route; Frederick Sound, a part of the Alaska Marine Highway that is used for saltwater attributes; and Saginaw Bay, which has notable saltwater uses.

About 8 percent of this roadless area was inventoried Variety Class A (possessing landscape diversity that is unique for the character type). Fourteen percent of the area was inventoried Variety Class B (possessing landscape diversity that is common for the character type). Approximately 69 percent was inventoried in Variety Class C (possessing a low degree of landscape diversity). Ten percent of the area was not inventoried.

The majority of this area, approximately 73 percent, was inventoried in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. Four percent of the area appears to be untouched by human activity and was inventoried in EVC Type II. Two percent of the area was inventoried in EVC Type III, where changes in the

landscape may be seen by the average person, but appear natural. Five percent of the area was inventoried in EVC Type IV, where changes in the landscape are easily noticed by the average person, but resemble natural patterns. Seven percent of the area was inventoried in EVC Type V, where changes in the landscape are obvious to the average person, and appear to be major disturbances. Approximately 10 percent of the area was not inventoried.

(7) Social, Cultural, and Historical Values: The area lies within the traditional territory of the Kake Tlingit. Numerous cultural resource sites exist in the area, including the remains of villages, temporary camps, cave shelters, fish weirs, burial sites, pictographs, petroglyphs, and garden sites. An historic cannery was located in Saginaw Bay and several fur farms and temporary camps on the Keku Islets. These cultural resources would be beneficial in interpreting the history and prehistory of the area to visitors. Saginaw Bay was heavily used prior to 1870 and is still important for gathering subsistence items, especially for the people of Kake. The major resource gathering activities are hunting; fishing; shellfish gathering; and firewood, berry, and herring egg harvest. Subsistence deer and bear hunting also occur in the area. Both VCUs in the area, 398 and 399, are listed among the VCUs with the highest community use values. Neither is listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998). There are no developed recreation areas within the roadless area but there are five inventoried recreation places that are used for camping or picnicking along the shoreline. Road development associated with timber management has occurred to the south, along the head of Saginaw Bay. There is also a small, roaded area along Saginaw Bay, just southeast of Halleck Harbor.

There are small, non-National Forest System holdings along the shore (BLM and Sealaska Corporation) and two larger in-holdings that have been conveyed to the Sealaska Corporation and the Kake Tribal Corporation.

(8) Manageability as Wilderness and Boundary Conditions/Changes: Saltwater surrounds this roadless area on three sides: Saginaw Bay to the west, Frederick Sound to the north, and Keku Strait to the east. The Keku Islands, which are part of the roadless area, lie within the Keku Strait. Road access has been developed to the head of Saginaw Bay, with the potential to extend into the Keku Strait area. The roadless area is a long, narrow peninsula, less than 0.2 mile wide in places and averaging about 2 miles across. Roads and harvest units adjoin the western edge of the area. Most of the area is allocated to timber management, as is the heavily managed area to the south. Only the northern tip of the peninsula, the Fossil Bluffs area, and the offshore islands are allocated to a non-development LUD. The roadless area would be difficult to manage as a wilderness due to size, shape, and adjacent development. Also, much of the northeastern portion of the roadless area has been conveyed to the Sealaska Corporation and the Kake Tribal Corporation, further reducing the width of the area. Management under private ownership may or may not be consistent with wilderness designation. Much public interest has been expressed about this roadless area, especially from people at Kake. This in part reflects the high cultural and historic values associated with the area, as well as, the karst related resources.

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

(1) Recreation, Including Tourism Potential: Recreation potential for Keku is moderate. Tourism is increasing in Southeast Alaska and the area's proximity to Kake may result in increased use of the area by tourists. There is potential for additional outfitter and guide permits, cabins, and opportunities associated with roaded access. Five outfitter/guides used the roadless area in 2000, for a total of 636 service days.

(2) Subsistence Uses: Wilderness designation would not adversely affect these uses.

(3) Fish Resources: The only potential fish habitat improvement project identified for this area is a barrier falls modification on Gil Creek. A portion of Gil Creek is located within the roadless area boundary.

(4) Wildlife Resources: No wildlife habitat improvement projects have been identified for this area.

(5) Timber Resources: There are approximately 6,246 acres mapped as productive old growth in the roadless area. There are also approximately 272 acres of second growth. Of these, 4,861 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 1,096 acres or 10 percent of this roadless area are estimated to be suitable for timber

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production. Approximately 507 of the suitable acres are mapped as high-volume old growth; of these acres, 84 are mapped as high-volume, coarse-canopy old growth.

A logging camp was developed at nearby Rowan Bay in support of logging operations. Extensive road development and logging has occurred south of the roadless area. Most of the area is allocated for timber management. Some medium- and high-volume forest lies within helicopter yarding distance from saltwater or existing roads and might be economically harvested without additional roadbuilding. There are no roads or harvests currently planned in the roadless area.

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

(7) Minerals: There are no inventoried sites with high mineral development potential in the area. The roadless area contains an estimated 10,265 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991). All of these acres are considered to have moderate potential for development.

(8) Transportation and Utilities: The roadless area does not contain any transportation or utility corridors. Any roads built would likely be short roads built for timber sales rather than arterial roads.

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

(10) Areas of Scientific Interest: The area contains no Research Natural Areas. The Keku Islets Special Interest Area contains geologically and culturally interesting values. The fossil beds, karst formations, and caves may be of scientific and educational value. The mapped karst resources encompass approximately 2,300 acres or 21 percent of the roadless area. The area contains cultural resources that could be used to interpret the history and prehistory of the area. Management of this area as wilderness may restrict research activities.

(11) Land Use Authorizations: Forest Service records show that five outfitters/guides used this area in 2000 for a total of 636 service days for remote setting nature tours.

(12) Land Status: All land within the roadless area is part of the National Forest System. Encumbered land is located in the central part of this roadless area and is adjacent to land owned by Native Village Corporations.

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: This area has cultural and traditional use value to the residents of Kake. It is an important subsistence use area for the residents of Kake.

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

(c) Public Input During Forest Plan Revision and Appeals: The Kake Tribal Council wanted all of the bays and inlets on north Kuiu Island protected from timber harvest. The Narrows Conservation Coalition wanted all of north Kuiu Island managed for primitive recreation. The City of Kupreanof commented that the area should be preserved as a wilderness because of its subsistence value. Other comments supported managing the area as old growth and prohibiting logging because of the adverse impact on major subsistence streams, archaeological sites, commercial fishing, Alaska Natives, and on private property. Timber interests commented that no new areas should be designated as wilderness.

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

Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development. Others wanted to see development continue on the Tongass.

(e) Public Input Expressed for Project-level EISs and Other Input: Public input was received on the Crane and Rowan Mountain Timber Sale EIS. The Southeast Alaska Conservation Council stated that no decision should be made until the roadless issue is decided at the national level. The City of Kake commented that subsistence use would be adversely affected by timber harvest, including the cultural and spiritual value of participating in traditional subsistence harvests in the old-growth forests used by the ancestors of the Tlingit residents of Kake for countless generations. Logging and road building in these sacred places permanently and irreparably degrades an important cultural experience. They stated that courts have recognized that ANILCA protects this value. This position was supported by the Southeast Alaska Conservation Council, the Earthjustice Legal Defense Fund, and other commenters. The Alaska Forest Association supported roads and timber harvest.

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

SEACC recommended the remaining unlogged portions of northern Kuiu Island should be protected by LUD II designation. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 239 for permanent protection as LUD II.

A number of cave/karst experts and other individuals stated that this area contains approximately 2,400 acres of karst that extends from alpine to sea level and includes a wide range of development. The Keku Islets Special Interest Area also includes numerous interesting formations including arches, small caves, sea stacks, and cliffs, along with many fossils. The commenters noted that this area and adjacent developed karstlands should be protected as wilderness.

Some individuals recommended protection of Threemile Arm and Port Camden.

(2) Nearby Roadless and Wilderness Areas and Uses: The area is separated from other roadless and wilderness areas by Frederick Sound and Port Camden and the Keku Strait on the north and east and by roaded and harvested lands to the west and south. However, it is adjacent to Camden Roadless Area (242), which covers much of northeast Kuiu Island, by a narrow strip of roadless land near Gil Harbor. The western portion of Camden Roadless Area (242) is narrow and is separated from the eastern portion of Camden Roadless Area by saltwater (Port Camden). These roadless areas receive light to moderate use.

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

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	95	100
Petersburg (Pop. 3,224)	40	90
Wrangell (Pop. 2,308)	70	85
Ketchikan (Pop. 14,070)	135	150

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

(4) Relative Contribution to the National Wilderness Preservation System: The Keku Roadless Area is located on the northern end of Kuiu Island and the nearby Keku Islands. It lies east of Saginaw Bay, west of Keku Strait, and south of Frederick Sound. Developed lands lie to the south. There is also a small, developed area along Saginaw Bay, just southeast of Halleck Harbor. Landforms in this area are characterized by gently-sloping to moderately-steep hills that are abruptly broken by prominent limestone cliffs.

Appendix C

The roadless area is mostly unmodified; however, it is influenced by developments on adjacent lands. The natural integrity and apparent naturalness is rated high for the area. The opportunity for solitude is moderate and the opportunity for primitive recreation is moderate.

Approximately 8 percent of the landscape is considered distinctive for the character type from a scenery standpoint. Keku Islets Special Interest Area is geologically interesting with its unusual limestone formations, as well as plant and animal fossils. It also has numerous cultural sites. The fossil beds, karst formations, and caves may be of scientific and educational value. The area contains cultural and historical resources that would be beneficial in interpreting the history and prehistory of the area to visitors.

The roadless area includes about 2,761 acres of high-volume, old-growth forest. Of these acres, 480 are mapped as high-volume, coarse-canopy old growth.

The Keku Roadless Area is classified as being in the Kuiu Island Biogeographic Province and makes about 2 percent of the province. It is one of eight inventoried roadless areas found within the province that collectively make up about 53 percent of the province. The Tebenkof Bay and the Kuiu Wildernesses are located in this province and makes up about 26 percent of the province. The province also includes the Summer, Conclusion, and associated islands LUD II area that make up about 1 percent of the province.

The Keku Roadless Area lies within two ecological sections; it represents approximately 1 percent of the Kupreanof Lowlands Ecological Section and 0.5 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section. Approximately 1 percent of the Kupreanof Lowlands Ecological Section is in existing wilderness, 1 percent is in existing LUD II, and an additional 33 percent is protected by other existing non-development LUDs. Approximately 13 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section is in existing wilderness, 8 percent is in existing LUD II, and an additional 33 percent is protected by other existing non-development LUDs.

The majority (68 percent) of the roadless area is in Kake Volcanics Ecological Subsection; this portion of the roadless area represents 6 percent of the entire ecological subsection. Approximately 23 percent of this ecological subsection is protected by existing non-development LUDs. The remaining 32 percent of the roadless area is in the North Prince of Wales-Kuiu Carbonates Ecological Subsection; this portion of the roadless area represents 1 percent of the entire ecological subsection, 2 percent of which is protected in existing LUD II and 25 percent in other existing non-development LUDs.

The Keku Roadless Area was rated 19 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 70th from the highest (along with 13 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for management of the area in an unroaded condition, but very little support for designating the area as wilderness. Designation would create a wilderness that has high cultural, historic, geologic, and scientific values. Designation of the area would add Congressional protection to about 6 percent of the Kake Volcanics Ecological Subsection that is not currently represented in wilderness or LUD II. The area is also influenced by ongoing developments in the immediate area. It also has adjacent private land parcels and one larger inholding of private land. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be low to moderate.

V. Environmental Consequences

The Keku Roadless Area would be managed under the existing Forest Plan if Alternative 1, 2, 3, 4, 5, or 7 is implemented. Approximately 27 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 73 percent. The land in the development LUDs provides an estimated 1,096 acres that are suitable for timber production (1 percent of the suitable acres on the Petersburg Ranger District). Approximately 84 of the suitable acres are classified as high-volume, coarse-canopy old growth. Timber sales under contract and future sales would continue. The roadless area contains an estimated 10,265 acres of undiscovered locatable mineral resources; all the acres are considered to have moderate potential for development. The timber sales, recreation, minerals, and special use programs would continue. The values associated with the natural settings of the roadless area could be affected by ongoing developments allowed by the

Appendix C

Forest Plan. The values associated with the very high cultural, historic, geologic, and most scenic values of the roadless area are protected by the Forest Plan.

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

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness. No timber harvest would be allowed and the recreation, minerals, and special uses programs could be restricted. Mineral prospecting would be allowed up to the time that the area is actually designated as wilderness by Congress. Designation of the area would add Congressional protection to about 6 percent of the Kake Volcanics Ecological Subsection that is not currently represented in wilderness or LUD II. The values associated with the natural settings of the roadless area, including the very high cultural, historic, geologic and scenic values, would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 239 (in acres)								
Land Use Designation	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Recommended Wilderness								11,170
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area	1,120	1,120	1,120	1,120	1,120		1,120	
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	1,899	1,899	1,899	1,899	1,899		1,899	
Semi-remote Recreation	43	43	43	43	43		43	
Recommended LUD II						11,170		
LUD II								
Wild, Scenic, Recreational River								
Experimental Forest								
Scenic Viewshed	1,564	1,564	1,564	1,564	1,564		1,564	
Modified Landscape								
Timber Production	6,543	6,543	6,543	6,543	6,543		6,543	
TOTAL	11,170	11,170	11,170	11,170	11,170	11,170	11,170	11,170
Suitable Timber Lands	1,096	1,096	1,096	1,096	1,096	0	1,096	0