

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** South Kupreanof (214)

**ACRES (NFS):** 213,122

**BIOGEOGRAPHIC PROVINCE:** Kupreanof/Mitkof Islands

**ECOLOGICAL SECTION:** Kupreanof Lowlands

**2003 WILDERNESS ATTRIBUTE RATING:** 24

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

(1) **Location and Access:** The South Kupreanof Roadless Area occupies most of the southern half of the island. Petersburg is approximately 10 air miles to the east and the community of Kake is 15 air miles to the northwest. Petersburg and Kake are served by the Alaska Marine Highway and Petersburg has daily jet service. The South Kupreanof Roadless Area is accessible primarily from saltwater (in upper Duncan Canal, Sumner Strait, or the southern end of Keku Strait) by boat or floatplane. Very few good anchorages are located along the southern shoreline (along Sumner Strait) and within Duncan Canal. Several of the inland lakes are large enough to land small floatplanes. A road has been built near the northern center of the roadless area and connects to the community of Kake. There are no sites suitable for landing wheeled aircraft. Access to other portions of the area is by foot or helicopter,

(2) **History:** The area lies within the traditional territory of the Kake and Stikine Tlingit. An extensive cultural resource survey has occurred along the southern and southwestern coast of the area. Identified archaeological sites include historic period cabins, fur farms, and a saltery. Culturally modified trees dot the shoreline and historic period mining has occurred in the area interior. Prehistoric period sites include fish traps, villages and camps. No known significant sites are located in the area interior. There are extensive areas of beach logging along the coast. Some beach logging areas with road constructed along the southeastern coast about the roadless area. In the late 1990s, a road was constructed into the middle of the area from the north and some timber was harvested; this road is under contract and is still being constructed as part of the Four Leaf Timber Sale.

(3) **Geography and Topography:** This roadless area is characterized by moderately steep hills and ridges typically less than 1,500 feet in elevation. A few peaks in the area are over 2,000 feet. The many small drainages created by the dissected ridgelines generally flow in a southerly direction towards Totem Bay. Many muskeg openings exist; some are quite large. Spruce-hemlock forest is typical, and is found on the ridge slopes and drainage bottoms forming string-like patterns scattered across the landscape. Two major watersheds, Kushneahin and Irish Creeks, begin from lakes. Two others, Castle River and Tunehean Creek, have headwaters in this area. The area contains 107 miles of shoreline on saltwater. Freshwater lakes are mapped on approximately 604 acres. The major lakes are Kushneashin Lake in the southwest, Irish Lakes, Kluane Lake in the central section near the recent addition of Road 6314, and Towers Lake in the northeast. Alpine habitat occupies about 1,313 acres, and there is very little rock surface mapped as 79 acres. There are no ice or snowfield features mapped in this area. Islands and islets account for approximately 462 acres of the area.

(4) **Ecosystem:**

(a) **Classification:** Biogeographic Province. The area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province. The area typifies the low-lying, rolling terrain with little relief and rounded gentle ridges characteristic of this province. There are no known unique geologic formations or plant/soil associations.

Ecological Section/Subsection. The South Kupreanof Roadless Area is contained entirely within the Kupreanof Lowlands Ecological Section (M246G). These areas are represented by three ecological

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subsections (see table below). The Sumner Strait Volcanics Ecological Subsection represents the majority of the South Kupreanof 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. The Duncan Canal Till Lowlands Ecological Subsection covers a quarter of the roadless area and is the other significant subsection within the South Kupreanof Roadless Area. The low relief, high precipitation, and depositional soils have produced an abundance of wetlands on poorly drained sites. Productive forests are limited to slopes and riparian areas with mineral soil (Nowacki et al., 2001).

<b>Ecological Section</b>	<b>Ecological Subsection</b>	<b>Percent of Roadless Area</b>
Kupreanof Lowlands	Sumner Strait Volcanics	75%
	Duncan Canal Till Lowlands	23%
	Kake Volcanics	2%

**(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.

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

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

**(c) Vegetation:** Extensive muskeg forested wetland timber complexes are interspersed with mixed conifer plant communities of western hemlock, Sitka spruce, and yellow-cedar on better-drained sites. There are 10,686 acres of muskeg mapped within this area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Western hemlock and Alaska-cedar plant communities dominate timbered hill slopes. Minor amounts of redcedar are present, but this roadless area is near the northern extent of the range for redcedar. The south-central and southeastern portions have predominantly muskeg mosaic systems. The southwestern section has most of the forested areas. There are about 1,313 acres of alpine vegetation mapped within the area.

There are approximately 197,902 acres mapped as forest land of which 81,989 acres or 41 percent are mapped as productive old-growth forest. Of the productive old growth, 22,405 acres or 27 percent are mapped as high-volume old-growth forest. The productive old growth includes about 4,546 acres of high-volume, coarse-canopy old growth. There are about 2,108 acres of second-growth forest where timber harvest has occurred in the past mostly the result of beach harvest in the past.

**(d) Fish Resources:** The area contains either the entire stream or the headwaters of approximately 20 ADF&G-numbered salmon producing streams. The most important include Kushneahin Creek, Irish Creek, Tunehan Creek and the headwaters of Castle River. These streams support runs of pink, chum, coho, and sockeye salmon and steelhead trout along with resident fish species of cutthroat and Dolly Varden char.

**(e) Wildlife Resources:** Sitka black-tailed deer and moose are present, and black bears are abundant. Wolves are located across all habitat types. Mink, river otters, beaver, marten, ermine, red squirrel, mice, shrews, and voles are well distributed. Fishers and wolverines are incidental species. A mountain lion was once trapped near Totem Bay; however, this species is considered a rare migrant on Mitkof and Kupreanof Islands and the Alaska portion of the mainland. The northern flying squirrel has been migrating to Kupreanof Island but is not yet well distributed on the island; some may occur within this roadless area.

Bald eagles, northern goshawks, red-tailed hawks, sharp-shinned hawks, species of owls, spruce grouse and ptarmigan all occur within the roadless area. Bats are present during the summer months and may overwinter. The American peregrine falcon may migrate through the district, and can be found around large shorebird population areas. The bays are important waterfowl habitat areas.

Numerous species of ducks and geese, trumpeter swans, marbled murrelets, sandhill cranes, and great blue herons have been seen within this roadless area, both during migration and, in some cases, during the nesting season. Harlequin ducks have been observed on Sumner Strait.

Many species of birds are present. Red-throated, Pacific, and common loons all occur on Kupreanof 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.

Amphibians known to occur on Kupreanof Island include the rough-skinned newt and western toad. 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.

Sea mammals known to inhabit the waters surrounding Kupreanof Island are the Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal. Sea otters are migrating into the Inside Passage area and have been sited in Sumner Strait south of the roadless area.

**(5) Management Direction and Current Uses:** The roadless area was allocated to seven different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These seven LUDs are Timber Production, Modified Landscape, Scenic Viewshed, Transportation and Utility System (TUS), Semi-remote Recreation, Old-growth Habitat, and Remote Recreation. The TUS LUD is a secondary LUD that overlays the other land uses.

LUD	Acres
Timber Production	164,438
Modified Landscape	3,916
Scenic Viewshed	943
Transportation and Utility System	NA
Semi-remote Recreation	13,003
Old-growth Habitat	30,572
Remote Recreation	250

Approximately 80 percent of the roadless area was allocated to a development LUD (Timber Production Modified Landscape, Scenic Viewshed). Most of this roadless area, approximately 77 percent, was allocated to the Timber Production LUD. This LUD is located in the interior area out to the coastline of Keku Strait and Sumner Straits, including the area adjacent to Totem and Douglas Bays. The Modified Landscape LUD was assigned to approximately 2 percent of the roadless area, located mostly in the northwest part of the area out through east of Keku Strait. The northwest part of this roadless area near Keku Strait was also designated to the Scenic Viewshed LUD, accounting for less than 1 percent of the roadless area. The TUS LUD overlay traverses from Duncan Canal west to the existing road system on to Kake. This represents a potential utility corridor that could link Kake into a Southeast Alaska power grid.

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Approximately 20 percent of the roadless area was allocated to a non-development LUD (Semi-remote Recreation, Old-growth Habitat, Remote Recreation). The Semi-remote Recreation LUD was assigned to approximately 6 percent of the roadless area. The Semi-remote Recreation LUD is located along the tidal flats of Towers Arm and upper Duncan Canal, around Towers Lake and Upper Keku Creek. Numerous small islands around the roadless area were also allocated to this LUD. Approximately 14 percent of the roadless area was allocated to the Old-growth Habitat LUD. This LUD is represented by eight small Old-growth Habitat reserves each with about 2,000 to 3,000 acres depending on the size of the watershed.

Three major fish enhancement projects, including two fish ladders, have been constructed on the Irish and Keku Creek system. A steppass fish ladder was constructed on Upper Keku Creek in 1985.

The Clover Timber Sale expanded the road system and harvested timber in this area during the late 1990s. Four Leaf and Shamrock Timber Sales are currently under contract and includes harvesting timber and the construction of new road. Harvesting and roading will occur primarily in the northern half of VCU 429 (Irish Creek). Douglas Timber Sale is currently being analyzed and includes most of the southern portion of this roadless area. Other timber harvest projects are planned in later years and are on the 10-year timber resource schedule.

Overall, this roadless area receives low to moderate recreational use, depending on which part of the roadless area. Recreation use includes bear, deer, moose, and waterfowl hunting; coho salmon, pink salmon, steelhead, and trout fishing; beachcombing; seakayaking; camping, recreation cabin use; and viewing from marine access. Agate Beach is popular with independent travelers and medium size cruise ships. The Irish Lakes are accessed from the new piece of the 6314 road for hunting and fishing. Black bear hunting occurs all along the shoreline, especially with the recent hunting closures on Kuiu Island. The Towers Arm Cabin receives light use. Sea kayak paddling and camping occur along all of the shoreline. However, parts of the interior are not used at all for recreation or hunting since the only access is by foot or helicopter and other areas are more desirable for these activities.

**(6) Appearance (Apparent Naturalness):** Natural appearance dominates the landscape, except for the beach area along Keku and Sumner Straits which appears modified due to past beach logging. Also, the apparent naturalness of the area adjacent to recent road building and timber harvest has been adversely affected.

**(7) Surroundings (External Influences):** South Kupreanof Roadless Area is mostly surrounded by other roadless areas. The area is east of Rocky Pass Roadless Area (243) and west of Castle Roadless Area (215) on Kupreanof Island. The North Kupreanof Roadless Area (211) and a developed area southeast of Kake lie to the north. On the northeast corner, it adjoins the Petersburg Creek-Duncan Salt Chuck Wilderness area. The boundary in the south is the shoreline along Sumner Strait, which was not considered part of the 1990 roadless area due to the beach logging that occurred in the late 1960s through the mid-1970s. Road construction is occurring in the northern portion and is planned for the southern part. The area is relatively flat, lessening the external influence on the interior of the roadless area.

**(8) Attractions and Features of Special Interest:** The area contains 17 inventoried recreation places that cover 24,470 acres, or 11 percent of the roadless area. The areas immediately adjacent to saltwater and major creeks are highly valued for recreation uses such as black bear and waterfowl hunting, camping, trapping, beach combing, and sport fishing. Beaches between Point Barrie and Totem Point are made up of small multi-colored and agate-like stones. This area attracts visitors, both on small cruise ships and charter boats as well as independent boaters. Stone columns produced by erosion formed the "totems" at the head of Totem Bay. The Forest Service once maintained a recreation cabin at Towers Lake. Sport fishing occurs on major streams and black bear hunting mostly occurs on the shoreline and near streams.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** The boundary in the south has been expanded to include older harvest units, which are 30 to 40 years old along the shoreline. This area has been added into the roadless area because it does not contain roads and because trees have revegetated the harvest units. A road has been extended towards the center of the roadless area from the north. Some units along the road have been harvested. This corridor has been dropped from the roadless area.

**II. Capability for Management as Wilderness**

**(1) Natural Integrity and Apparent Naturalness:** Most of the South Kupreanof Roadless Area is unmodified. The beach area, where logging has occurred in the past, and areas adjacent to recent road building and timber harvest appear modified. However, tree growth in areas harvested in the 1960s and 1970s along the beach has mostly restored the natural appearance of the area although these units are still noticeable. Classification as wilderness is suitable because natural and unmodified appearance dominate the landscape.

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There is a high opportunity for solitude and primitive recreation in the South Kupreanof Roadless Area. Use of floatplanes and motorboats may disrupt visitors on the shore for brief periods, but a person camped or traveling inland is unlikely to encounter others. Travel on land is moderately difficult, offering a moderately 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.

Agate Beach is popular with independent travelers and small to medium-size cruise ships. The Irish Lakes are accessed from the new road for hunting and fishing. Black bear hunting occurs all along the shoreline, especially with hunting closures on Kuiu Island. The Towers Arm Cabin receives light use. Sea kayak paddling and camping occur along all of the shoreline.

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	Acreage	Percent of Total ROS
Primitive (P)	151,875	71%
Semi-Primitive Non-Motorized (SPNM)	38,863	18%
Semi-Primitive Motorized (SPM)	9,721	5%
Roaded Modified (RM)	12,662	6%

The area contains 17 inventoried recreation places that cover 24,470 acres, or 11 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	4	2,092
SPNM	3	11,636
SPM	4	7,632
RM	8	3,110

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

Present recreation use levels are low. There are two public recreation cabins in the area, one of which is out of service. Although upper Castle River does not have developed recreation sites, two Forest Service cabins and Hiking Trail # 459 are located downstream around Castle Flats, in Roadless Area 215.

**(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 original Analysis of the Management Situation developed in support of the Forest Plan Revision. At that time, the South Kupreanof Roadless Area was given a rating of 26 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 24. The new rating reflects the extension of the road system into the interior of the roadless area from the north and into the upper watershed of the Castle River.

### (4) Ecologic and Geologic Values:

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 429, 432, and 436 as primary producers of salmon, and VCU 436 as a primary producer of sportfish.

Castle River is a very popular sport fishing area for coho, and has high commercial and sport fish values for coho salmon, steelhead, and cutthroat trout. ADF&G lists Castle River as one of the top 19 “high quality watersheds” in Southeast Alaska. The large amount of spawning and rearing habitat in the river, contribute to its importance for commercial and sport fishing.

Irish and Keku Creeks have high commercial value for coho salmon and sport value for steelhead. Keku Creek drainage is an important rearing area for juvenile coho salmon. Irish Lakes support populations of cutthroat trout and kokanee salmon. Three major fish enhancement projects, including two fish ladders, have been constructed on the Irish and Keku Creek system. A steppass fish ladder was constructed on Upper Keku Creek in 1985.

Tunehan Creek has high commercial and sport fish values for coho salmon and steelhead. Zim Creek is considered to have very good coho salmon smolt capability. Outfitters and guides use the creek for steelhead. ADF&G lists this stream as significant overwintering habitat for Dolly Varden, and a significant steelhead stream.

Kushneahin Creek has high sport fish value for sockeye and steelhead, and steelhead value of regional significance. The system also has limited habitat for coho salmon.

**(b) Wildlife Resources:** Historically, South Kupreanof Island has been known for moderate to high Sitka black-tailed deer populations. In the late 1960s and early 1970s, the central portion of Southeast Alaska experienced a decline in deer populations. Populations on the island are increasing. Recent surveys indicate a growing moose population here. Kushneahin Creek has a significant black bear population. Some trapping occurs along the southern coastline. A mountain lion was once trapped near Totem Bay; however, this species is considered a rare migrant on Mitkof and Kupreanof Islands and the Alaska portion of the mainland.

There are known goshawk, red-tailed hawk, sharp-shinned hawk, and great blue heron nests within this roadless area. Sandhill cranes have been observed in the muskegs but it is not known if they nest here. Harlequin ducks have been observed on Sumner Strait. Towers Lake is a key waterfowl area. The American peregrine falcon may migrate through this area, and is most likely to be present around shorebird population centers.

There is a key wildlife and waterfowl migration route on the isthmus between Duncan Salt Chuck and Portage Bay to the northeast of this roadless area. There is a key wildlife east-west movement corridor from Duncan Canal to Rocky Pass (Keku Strait) along the Castle River and Keku Creek drainages. Irish Lakes, Towers Lake, and Kushneahin Creek and Lake are key waterfowl areas for Kupreanof Island.

Sea otters are migrating into the Inside Passage area and have been sited in Sumner Strait south of the roadless 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). Humpback whales are known to use Duncan Canal and

Stellar sea lions use the waters around the island but there are no known haulout areas along the roadless area's shores. 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. Goshawks and trumpeter swans have been documented within the roadless area. Ospreys have nested at Douglas Bay and the Duncan Canal Tidal Flats and have been seen at Towers Arm and Irish Lakes. In addition, 12 sensitive plant species are known or suspected to occur in the Petersburg Ranger District. One sensitive plant, *Poa laxiflora*, has been found along the southern shore of the area near Totem Bay.

**(d) Karst, Cave, and Other Geologic Resources:** There is a small area of low vulnerability karst north of Taylor Creek along the shore of Towers Arm. There are 54 acres of karst resources, or less than 1 percent, mapped in this roadless area. Stone columns comprised of columnar basalt formed the "totems" at the head of Totem Bay.

**(5) Scientific and Educational Values:** No unique scientific or educational values have been identified.

**(6) Scenic Values:** Portions of the roadless area are viewed from Sumner Strait, a major travel route used by tour boats. The Tunehean Creek drainage is seen as background from Rocky Pass, a secondary travel route used frequently by recreationists in small boats. Most of the roadless area appears unmodified from established travel routes; although the beach area appears modified where timber harvest has occurred in the past and it will be less obvious as the trees grow. Areas with recent harvest and road building in the center of the roadless area appear highly modified.

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; Keku Strait, a tour ship and small boat route; Rocky Pass, Duncan Canal, and Towers Arm, which are small boat routes; Totem and Douglas Bay, Duncan Canal, and the Point Barrie to Totem Bay area, which are saltwater use areas; and the public recreation cabins at Towers Arm, Towers Lake (no longer in service), and Indian Point.

Approximately 15 percent of this roadless area is inventoried in Variety Class B (possessing landscape diversity that is common for the character type). The remaining 85 percent is inventoried in Variety Class C (possessing a low degree of landscape diversity).

The majority of this area (89 percent) is natural appearing and is in Existing Visual Condition (EVC) Type I, where only ecological change has occurred. About 4 percent of the area is in EVC III, where the average person notices changes in the landscape, but they do not attract attention. Two percent of the area has an EVC of Type IV, where changes in the landscape are easily noticed by the average person and may attract some attention. They appear to be disturbances but resemble natural patterns. Four percent is in 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 lies within the traditional territory of the Kake and Stikine Tlingit. Extensive cultural resource survey has occurred along the southern and southwestern coast of the area. Identified archaeological sites include historic period cabins, fur farms, and a saltery. Culturally modified trees dot the shoreline and historic period mining has occurred in the area interior. Prehistoric period sites include fish traps, villages, and camps. No known significant cultural sites are located in the area interior. A rather extensive road system, designed for timber management, extends into the center of the area from Kake to the headwaters of Keku Creek and Castle River. The road system is also used for deer, moose, and black bear hunting. Recreation in the area is moderate. Sport fishing, hunting, and mineral collecting occurs along the beach. VCUs 429, 432, 433, 436 were listed among the VCUs with highest community fish and wildlife values. No VCUs were listed in the second or third most important group for community use value. VCUs 427.1, 431, 432, and 433 were listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998).

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**(8) Manageability as Wilderness and Boundaries Conditions/Changes:** South Kupreanof Roadless Area is surrounded by roadless areas on three sides, forming the center of a relatively large roadless area that entails portions of several closely located islands. The area is east of Rocky Pass Roadless Area (243) and west of Castle Roadless Area (215) on Kupreanof Island. The drainages located in the southwest portion of the roadless area could be managed with the Rocky Pass Roadless Area. The North Kupreanof Roadless Area (211) and a developed area southeast of Kake lie to the north. On the northeast corner, it adjoins the Petersburg Creek-Duncan Salt Chuck Wilderness. The boundary in the south is the shoreline along Sumner Strait and Keku Strait. A road has been extended towards the middle of the roadless area from the north. Some units have been harvested along the road and further road building and harvest is planned. This has influenced the integrity and the manageability of the roadless area to some extent.

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

**(1) Recreation, Including Tourism Potential:** Overall recreation potential for South Kupreanof is low. A variety of recreation opportunities, which are of interest to the average visitor, are limited in the area. A road system now links Kake to the interior of the roadless area and additional road construction is under contract with the Four Leaf Timber Sale. This will improve access for some types of recreation, and the surrounding area may have more recreation potential than in the past, particularly attractions like Irish Lakes and Kluane Lake. Kushneahin Lake also has higher recreation potential since it is large enough for a floatplane to land on.

In 1996, the Alaska Visitors Association (AVA) proposed three recreation developments in the South Kupreanof area. In Totem Bay and in the area between Towers Arm and Hamilton Bay, AVA proposed hut-to-hut canoeing with capacity for 25 persons per day. A day wildlife observatory with capacity for 25 persons per day was proposed along Castle River. A commenter on the Douglas Timber Sale project proposed a black bear viewing facility at the mouth of Lovelace Creek. None of these projects is scheduled for implementation at this time nor planned for the foreseeable future.

**(2) Subsistence Uses:** Existing subsistence use is not likely to be affected by continued management as a roadless area or as wilderness.

**(3) Fish Resources:** Three major fish enhancement projects, including two fish ladders, have been constructed on the Irish and Keku Creek system. A steppass fish ladder was constructed on Upper Keku Creek in 1985. There was an enhancement project on Tunehean Creek outside the roadless area to provide future large woody debris to improve fish habitat in areas where timber has been harvested by thinning the small streamside trees to induce the trees to grow faster. There is a potential fish enhancement project to alter a partial barrier to fish passage on Kushneahin Creek.

**(4) Wildlife Resources:** No wildlife habitat improvement projects are planned currently in this area. Some of the second-growth stands may be thinned to improve wildlife use of the shoreline area.

**(5) Timber Resources:** There are approximately 81,989 acres mapped as productive old growth in the roadless area and there are 2,108 acres of second growth resulting from timber harvest. Of these acres, 45,864 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), 19,365 acres, or 9 percent of this roadless area are estimated to be suitable for timber production. Approximately 6,807 of the suitable acres are mapped as high-volume old growth; of these acres, 1,108 are mapped as high-volume, coarse-canopy old growth.

Timber harvest and road construction under the Four Leaf and Shamrock Timber Sales will continue to occur in the roadless area. Evaluation is currently underway for the Douglas Timber Sale in the Southern portion of the area. Other projects are planned in the 10-year sale schedule.

**(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 U.S. Bureau of Land Management lists the Tunehan Creek area as having potential for mineral extraction for copper and molybdenum. The U.S. Geological Survey (USGS) also identified the potential copper resources in the Duncan Salt Chuck area. Valid mining claims exist west of Duncan Salt Chuck Creek.

The roadless area contains 2,361 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals and 916 acres of land with low potential (Coldwell, 1990; USDA Forest Service, 1991). In addition, the roadless area contains an estimated 157,136 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:** Any further road development is expected to be for timber management. Extending Road 6314 south would connect Kake with the southern shore of Kupreanof Island. The Forest Plan identifies a potential powerline corridor paralleling Big John Creek towards upper Duncan Canal and then following Duncan Canal for approximately 8 miles before crossing the Canal and heading towards Mitkof Island. This corridor represents an alternate route for an intertie between Kake and the Tyee powerline. Wilderness designation could preclude the use of this route.

(9) **Water Availability and Use:** The one public recreation cabin still in service relies on the use of surface water. There are no existing or planned hydroelectric or domestic water projects in the area.

(10) **Areas of Scientific Interest:** The mapped karst resources encompass approximately 54 acres or less than one percent of the roadless area. The area contains no Research Natural Areas and has not been identified for any other scientific value.

(11) **Land Use Authorizations:** A special use permit has been issued for a tent platform at Irish Lakes.

(12) **Land Status:** There is no other land ownership within the roadless area other than National Forest System lands.

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

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

(a) **Interest Expressed by Local Users and Residents:** The areas immediately adjacent to saltwater and major streams receive light recreational use. There is high interest in maintaining Duncan Canal in its natural state for recreational use. Most other lowlands are lacking interest to the average user.

(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 recommended a portion of this area (VCUs 440, 438, and 436) be designated as the West Duncan Wilderness. In 2001, HR 2908 proposed that the entire roadless area be designated as part of the West Duncan Canal/Castle River Wilderness.

(c) **Public Input During Forest Plan Revision and Appeals:** The Duncan Canal area received many comments with most requesting protection in the form of LUD II-type designations. Recreation, scenic, wildlife, and roadless values were the main reasons given. The Towers Arm and Castle River areas were among the main areas of concern. A number of streams, including the Castle River, Kushneahin Creek, and Lovelace Creek, were recommended for Wild and Scenic status. In 1996, the Alaska Visitor Association proposed that hut-to-hut canoeing be developed between Towers Arm and Hamilton Bay and along Totem Bay. They also proposed a day use wildlife observatory with a capacity of 25 people at Castle River, outside the roadless area. Timber industry comments supported continued road building and timber harvest.

In Forest Plan appeals, the Southeast Alaska Conservation Council (SEACC) identified the southwest portion of the area along Rocky Pass (Keku Strait) and part of the area along Sumner Strait as a "SEACC Special Area," recommending that it be protected from development.

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**(d) Public Input During Roadless Area Conservation Rule and Road Management Policy**

**Review:** This area was not specifically identified in the comments received on the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands in the Tongass to be protected from development, while others wanted to keep the current level of development.

**(e) Public Input Expressed for Project-level EISs and Other Input:** During the Shamrock Timber Harvest EIS and scoping for the Douglas Timber Harvest project, the following comments were received. The Narrows Conservation Coalition believes this locality to be unsuitable for timber harvest. The Forest Service should manage from existing roads rather than building more roads. There was concern with increased hunting pressure resulting from road construction. The City of Kupreanof is opposed to extensive timber harvest and the creation of an extensive road system in the area. Some residents of Kake would like access to the south end of Kupreanof Island by road and believe that this would bring economic opportunities to their community.

**(f) Public Input Expressed During Supplemental EIS Process:** The city of Kupreanof recommends the entire Castle River drainage for designation as wilderness.

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. However, they encouraged the Forest Service not to log or build logging roads in watersheds that are primary salmon producing watersheds or otherwise community use areas important to Petersburg residents including the Castle River.

The Organized Village of Kake passed a resolution requesting that “customary and traditional areas such as ... Totem and Douglas Bays (VCUs 132,433), Kushneahin Lake/stream (VCU 431)... be recommended for long-term protection”.

SEACC recommended that the South Kupreanof Roadless Area be designated as wilderness to protect valuable fish and wildlife habitat. They indicated that the Douglas and Totem Bay areas, along the southern boundary, contain extremely valuable fish habitat and are heavily utilized by residents of Kake, Port Protection, and Point Baker. Residents of these communities gave testimony asking for the protection of the high quality hunting opportunities on South Kupreanof. The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 214 for long-term protection.

Individuals noted the high subsistence value of the southern portion of this area to the residents of Point Baker. Others noted that the timber is so sparse on South Kupreanof, that it should be left alone and that the area has very high fish and wildlife values. Some individuals recommended South Kupreanof for protection.

**(2) Nearby Roadless and Wilderness Areas and Uses:** South Kupreanof is one of four contiguous roadless areas on the western portion of Kupreanof Island. The other roadless areas are Rocky Pass (243), Castle (215), and North Kupreanof (211). The Petersburg Creek-Duncan Salt Chuck Wilderness is also adjacent to this roadless area in the northeast. Overall, this area receives light recreational use. Timber management and road building has recently occurred in the middle of the roadless area and is currently on-going with the Four Leaf Timber Sale. Additional sales are being planned in the south part of the roadless area (Douglas Timber Sale EIS).

**(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>
Juneau (Pop. 30,711)	105	135
Petersburg (Pop. 3,224)	10	40
Wrangell (Pop. 2,308)	35	35
Ketchikan (Pop. 14,070)	95	100

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

**(4) Relative Contribution to the National Wilderness Preservation System:** South Kupreanof Roadless Area occupies most of the southern half of Kupreanof Island. Landforms in this area are characterized by uniformly-rolling to moderately-steep hills, typically less than 1,500 feet in elevation, though some peaks are over 2,000 feet. The ridges parallel each other in a roughly northwest to southeast direction. The area contains approximately 107 miles of shoreline on saltwater. Petersburg is about 10 air miles to the east and the community of Kake is 15 air miles to the northwest. It is accessible primarily from saltwater by boat or floatplane and by road from Kake.

This relatively large roadless area is mostly unmodified and natural appearing. However, the extension of the road system from the north, influence the area to some degree. The natural integrity and apparent naturalness are rated very high. The opportunity for solitude and primitive recreation is very high in the area.

None of the area is rated as distinctive for the character type from a scenery perspective. There is a small area of karst north of Taylor Creek along the shore of Towers Arm. Stone columns comprised of columnar basalt form the “totems” at the head of Totem Bay.

The roadless area includes about 22,405 acres of high-volume, old-growth forest. Of these acres, 4,546 are mapped as high-volume, coarse-canopy old growth.

The South Kupreanof Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 25 percent of the province. It is one of 12 inventoried roadless areas found within the province that collectively make up about 63 percent of the province. The Petersburg Creek-Duncan Salt Chuck Wilderness is located in this province and makes up about 6 percent of the province.

The South Kupreanof Roadless Area lies completely within the Kupreanof Lowlands Ecological Section and represents 19 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 majority (75 percent) of the roadless area is in the Sumner Strait Volcanics Ecological Subsection. This portion of the roadless area represents 45 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). Most of the balance (23 percent) of the roadless area is in the Duncan Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents 20 percent of the entire ecological subsection, 6 percent of which is in existing wilderness, and is well represented by other existing non-development LUDs (35 percent). The remaining 2 percent of the roadless area is within the Kake Volcanics Ecological Subsection; this portion of the roadless area represents 3 percent of the entire ecological subsection. Approximately 23 percent of this ecological subsection is protected by other existing non-development LUDs.

The South Kupreanof Roadless Area was rated 24 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 25th from the highest (along with four other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for wilderness designation of the South Kupreanof Roadless Area. Designation would create a wilderness that would make a large addition to the Petersburg Creek-Duncan Salt Chuck Wilderness. The roadless area connects several inventoried roadless areas that could be considered for an even larger wilderness. Designation of the area also would add Congressional protection to about 45 percent of the Sumner Strait Volcanics Ecological Subsection and 3 percent of the Kake Volcanics Ecological Subsection that each have about 1 percent or less in wilderness or LUD II. The Four Leaf and Shamrock Timber Sales are under contract and will continue to influence the north central portion of the roadless area. Additional timber sale-related planning for the southern portion is ongoing. The roadless area also includes an alternate route for power transmission that would connect Kake to the future Southeast Alaska power grid. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be moderate to high.

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### V. Environmental Consequences

The South Kupreanof Roadless Area would be managed under the existing Forest Plan if Alternative 1 or 2 is implemented. Approximately 20 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 80 percent. The land in the development LUDs provides an estimated 19,365 acres that are suitable for timber production (13 percent of the suitable acres on the Petersburg Ranger District). Approximately 1,108 of the suitable acres are classified as high-volume, coarse-canopy old growth. The Four Leaf Timber Sale that is under contract will continue. The roadless area contains approximately 2,361 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals and 916 acres of land with low potential. In addition, the roadless area contains an estimated 157,136 acres of undiscovered locatable mineral resources; 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 would be affected by ongoing developments.

Under Alternative 3, a 76,081-acre portion of the area in Old-growth Habitat, Semi-remote Recreation, Scenic Viewshed, Modified Landscape, and Timber Production LUDs would be converted to Recommended Wilderness. No timber harvest would be allowed and the recreation, minerals, and special use programs could be restricted within the Recommended Wilderness area. Lands suitable for timber production in the roadless area would be reduced to approximately 10,905 acres. Designation of the area as wilderness would expand the Petersburg Creek-Duncan Canal Wilderness area to the west and south. The values associated with the natural settings within the Recommended Wilderness area would receive long-term protection if designated.

Under Alternative 4, a 410-acre portion of the Semi-remote Recreation LUD would be converted to Recommended Wilderness. This would not affect timber sale projects because this area is currently allocated to a non-development LUD. The area suitable for timber production would not change from Alternative 1. No timber harvest would be allowed and the recreation, minerals, and special use programs could be restricted within the Recommended Wilderness area. The values associated with the natural settings within the Recommended Wilderness area would receive long-term protection if designated.

Under Alternative 5, a 107,719-acre portion of the area in Remote Recreation, Old-growth Habitat, Semi-remote Recreation, Scenic Viewshed, Modified Landscape, and Timber Production LUDs would be converted to Recommended Wilderness. Designation as wilderness would extend the Petersburg Creek-Duncan Creek Wilderness to the west and south, and add wilderness in the high value southwest portion of the roadless area associated with Rocky Pass. No timber harvest would be allowed and the recreation, minerals, and special use programs could be restricted in the Recommended Wilderness area. Lands suitable for timber production would be reduced to approximately 7,807 acres. The values associated with the natural settings within the Recommended Wilderness areas would receive long-term protection if designated.

Under Alternative 6, a 3,039-acre portion of the area would be converted to Recommended LUD II. The remaining portion of the roadless area, approximately 210,079 acres, would be converted to Recommended Wilderness. No timber harvest would be allowed in the roadless area. The ongoing recreation, transportation and utility planning, minerals, and special use programs would continue similar to current conditions in the Recommended LUD II. Restrictions could be expected on programs in the Recommended Wilderness portion. Mineral prospecting would be allowed in the Recommended Wilderness portion up to the time that the area is actually designated as wilderness by Congress. Designation of the area also would add Congressional protection to about 45 percent of the Sumner Strait Volcanics Ecological Subsection and 3 percent of the Kake Volcanics Ecological Subsection that each have about 1 percent or less in wilderness or LUD II. The values associated with the natural settings would receive long-term protection if designated LUD II or wilderness. Designation as wilderness would extend the Petersburg Creek-Duncan Creek Wilderness to the west and south across to Rocky Pass.

Under Alternative 7 or 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 also would add Congressional protection to about 45 percent of the Sumner Strait Volcanics Ecological Subsection and 3 percent of the Kake Volcanics Ecological Subsection that each have about 1 percent or

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less in wilderness or LUD II. The values associated with the natural settings in the roadless areas would receive long-term protection if designated wilderness. Designation as wilderness would extend the Petersburg Creek-Duncan Creek Wilderness to the west and south across to Rocky Pass.

<b>Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 214 (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>
<b>Recommended Wilderness</b>			76,081	410	107,719	210,083	213,122	213,122
<b>Wilderness</b>								
<b>Recommended Wilderness Nat. Mon.</b>								
<b>Wilderness National Monument</b>								
<b>Non-wilderness National Monument</b>								
<b>Research Natural Area</b>								
<b>Special Interest Area</b>								
<b>Remote Recreation</b>	250	250	250	250	179			
<b>Enacted Municipal Watershed</b>								
<b>Old-growth Habitat</b>	30,572	30,572	23,620	30,489	16,751			
<b>Semi-remote Recreation</b>	13,003	13,003	2,081	12,676	1,948			
<b>Recommended LUD II</b>						3,039		
<b>LUD II</b>								
<b>Wild, Scenic, Recreational River</b>								
<b>Experimental Forest</b>								
<b>Scenic Viewshed</b>	943	943	5	943	937			
<b>Modified Landscape</b>	3,916	3,916	75	3,916	1,470			
<b>Timber Production</b>	164,438	164,438	111,011	164,438	84,117			
<b>TOTAL</b>	<b>213,122</b>	<b>213,122</b>	<b>213,122</b>	<b>213,122</b>	<b>213,122</b>	<b>213,122</b>	<b>213,122</b>	<b>213,122</b>
<b>Suitable Timber Lands</b>	19,365	19,365	10,905	19,365	7,807	0	0	0