Appendix C

INDIVIDUAL ROADLESS AREA DESCRIPTION

ROADLESS AREA NAME: Castle (215)

ACRES (NFS): 52,432

BIOGEOGRAPHIC PROVINCE: Kupreanof/Mitkof Islands

ECOLOGICAL SECTION: Kupreanof Lowlands

2003 WILDERNESS ATTRIBUTE RATING: 25

I. Overview and Description

(1) Location and Access: The Castle Roadless Area lies along the southwest shore of Duncan Canal in the southeast corner of the main lobe of Kupreanof Island. It is mostly northwest of Kah Sheets Bay and includes Castle River estuary and flats, and the lower 1/3 of the watershed. Most of the shoreline along Kah Sheets Bay and areas along Little Duncan Bay are outside the roadless area boundary due to the presence of roads constructed for timber management in the mid 1970s. The roadless area also includes the Castle Islands in Duncan Canal, Kah Sheets and Lung Islands in Kah Sheets Bay, the Level Islands south of Kah Sheets Bay, and other small islands.

The community of Kake lies 30 air miles to the northwest, and the community of Petersburg lies 10 air miles to the northeast. Petersburg and Kake are served by the Alaska Marine Highway and Petersburg has daily jet service. The roadless area is accessed primarily from saltwater by boat or floatplane. Only a few good anchorages can be found along Duncan Canal. Kah Sheets Lake is large enough to land small floatplanes. There are no sites suitable for landing wheeled aircraft. Access to areas away from the water is by foot or helicopter.

(2) History: The area lies within the traditional territory of the Stikine Tlingit. Known cultural resources in the area include historic period cabins and a barite mine that operated in the area until the 1970s. Though limited archaeological survey has been completed in the area, culturally modified trees and prehistoric period site types that likely occur along the area shoreline include fish traps, villages, and camps. Timber harvest via Forest Service roads and beach logging occurs in the area. The area has relatively intensive recreation use compared to the surrounding roadless areas.

(3) Geography and Topography: This roadless area is similar in landform character to the adjacent South Kupreanof (214) Roadless Area. The distinctive feature is that it encompasses two major estuaries, Castle River Bay and Kah Sheets Bay. Relatively large tidal flats are formed in these bays at low tides. Kah Sheets Lake is the largest lake on Kupreanof Island. Islands and islets make up about 1,511 acres of this area, while alpine covers another 88 acres. Freshwater lakes total 429 acres and there are 75 miles of saltwater shoreline. There are no of ice or rock features mapped in the area.

(4) Ecosystem:

(a) Classification: Biogeographic Province. The area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province. This province is generally characterized by subdued, rolling topography and extensive muskeg areas, but may have rugged terrain in localized areas.

Ecological Section/Subsection. The Castle Roadless Area is contained entirely within the Kupreanof Lowlands Ecological Section (M246G). These areas are represented by two ecological subsections (see table below). The Duncan Canal Till Lowlands Ecological Subsection is the dominant subsection within the Castle 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. The Sumner Strait Volcanics Ecological Subsection represents about a third 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 (Nowacki et al., 2001).

Ecological Section	Ecological Subsection	Percent of Roadless Area
Kupreanof Lowlands	Duncan Canal Till Lowlands	64%
	Sumner Strait Volcanics	36%

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

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

(c) Vegetation: Muskeg/forested wetland timber complexes on wet areas are interspersed with mature mixed conifer plant communities on better-drained sites. Approximately 7,551 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, Sitka spruce, and Alaska-cedar plant communities. Minor amounts of redcedar are present. There are 88 acres of alpine vegetation mapped in the area.

There are approximately 43,893 acres mapped as forest land of which 20,165 acres or 46 percent are mapped as productive old-growth forest. Of the productive old growth, 6,312 acres or 31 percent are mapped as high-volume old-growth forest. The productive old growth includes about 1,900 acres of high-volume, coarse-canopy old growth. There are about 1,035 acres of second-growth forest where beach harvest has occurred in the past.

(d) Fish Resources: Fifteen Alaska Department of Fish and Game (ADF&G) numbered salmon producing streams are present. Kah Sheets and Castle River are the most well known. This area supports significant runs of steelhead and cutthroat trout, Dolly Varden char, and pink, chum, coho, and sockeye salmon.

(e) Wildlife Resources: Sitka black-tailed deer and moose are present, and black bears are abundant. 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. 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 to the west; 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 over-winter. 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 sighted in Sumner Strait south of the roadless area.

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

LUD	Acres
Timber Production	9,440
Modified Landscape	8,355
Scenic Viewshed	4,813
Semi-remote Recreation	14,797
Old-growth Habitat	11,566
Wild River	3,460

Approximately 43 percent of the roadless area was allocated to a development LUD (Timber Production, Modified Landscape, Scenic Viewshed). Approximately 18 percent of the roadless area was allocated to the Timber Production LUD. The Timber Production LUD is located in three areas, west of Whiskey Pass, west of Kah Sheets River, and next to Sumner Strait near Level Islands. The Modified Landscape LUD was assigned to approximately 16 percent of the roadless area. This LUD is located in the west central portion interspersed with the Scenic Viewshed LUD. Small areas around Duncan Canal were allocated to the Scenic Viewshed LUD, which accounts for approximately 9 percent of the roadless area.

Most of this roadless area, approximately 57 percent, was allocated to a non-development LUD (Semi-remote Recreation, Old-growth Habitat, Wild River). Much of the area along the Castle River, Duncan Canal shoreline, and Kah Sheets Bay was allocated to the Semi-remote Recreation LUD, which accounts for approximately 28 percent of the roadless area. The small islands associated with the roadless area are part of this LUD, too. Approximately 22 percent of the roadless area was allocated to the Old-growth Habitat LUD. Lands allocated to the Old-growth Habitat LUD are primarily located in three areas, on both sides of Little Duncan Bay and just north of Castle River. These two non-development LUDs combine to form a medium old-growth habitat reserve. Approximately 7 percent of the roadless area was allocated to the Wild River LUD located on Kah Sheets Creek and Lake.

This area has high recreation use. Recreation uses include bear, deer, moose, and waterfowl hunting; pink salmon, coho salmon, steelhead, and trout fishing; wildlife viewing; boating; recreation cabin use; camping; and hiking. There are two public recreation cabins near the mouth of Castle River, one cabin at Kah Sheets Lake, one on Kah Sheets Bay, and one cabin at Breiland Slough. Planked trails connect the Castle River cabins and provide good fishing opportunities along Castle River. A planked trail connects the Kah Sheets Bay cabin, just outside of the

roadless area, with the cabin on Kah Sheets Lake. The cabin at Kah Sheets Lake provides barrier-free access from a float plane dock. No outfitter/guide use was documented in 2000.

Other than beach logging and similar logging on the islands, no harvest or road building activity has taken place (except just outside the roadless area along the shoreline in two areas).

There are no active timber sales in this area or any timber harvest activities currently being analyzed. Timber harvest projects are planned in later years and are on the 10-year timber resource schedule.

(6) Appearance (Apparent Naturalness): This area appears largely unmodified and natural along Duncan Canal. Roads were constructed along portions of the shoreline along Little Duncan Bay and Kah Sheets Bay for timber harvest in the mid-1970s and the harvest is visible, but not dominant. Although these areas have been dropped from the roadless area, they are immediately adjacent to it. Several areas of beach logging are also present along the shoreline and especially on the small islands (Level Islands, Castle Islands, other small islands). There are facilities used by the FAA and the Coast Guard including a road on Level Island. The old barite mine site is apparent on the Castle Islands.

(7) Surroundings (External Influences): The area contains 12 inventoried recreation places that cover 13,372 acres, or 26 percent of the roadless area. Castle Roadless Area is surrounded by other roadless areas and saltwater. Beach logging and roading along the shoreline, which is just outside of the roadless area, has affected the character of this area. However, most of these areas have naturally revegetated and do not dominate the setting. Views of timber harvest and houses on private land across Duncan Canal are visible from parts of this roadless area.

(8) Attractions and Features of Special Interest: The areas immediately adjacent to saltwater or major creeks are highly valued for recreation uses such as black bear and waterfowl hunting, camping, beach combing, and sport fishing. The recreation cabins are popular and often in use from late April through October. Kah Sheets Lake Cabin offers a fly-in opportunity that is accessible to most users.

(9) Differences between the 1989 and 2003 Roadless Area Boundary: The Level Islands, Castle Islands, Kah Sheets Island, and Lung Island, as well as a few small areas along the coast with older beach logging units but no roads have been added.

II. Capability for Management as Wilderness

(1) Natural Integrity and Apparent Naturalness: The area is essentially unmodified, except for the logging activity outside the roadless area along the beach. Most of these areas have revegetated and do not dominate the setting. The overwhelming appearance of natural and unmodified land makes the area suitable for wilderness classification. The natural integrity of the area is also largely uncompromised.

(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 Castle Roadless Area. However, floatplanes and motorboats may disrupt visitors for brief periods. Present recreation use levels are moderate to high in specific locations. Visitors would expect to see or be seen by others in passing boats if camped directly on the beach.

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.

The area provides primarily semi-primitive and primitive recreation opportunities. The coastal recreation attractions and the remoteness of the island's outer coast create outstanding prospects for primitive recreation. The table below lists the acreage and percent of the various Recreation Opportunity Spectrum (ROS) classes that have been inventoried in the roadless area.

ROS Class	Acres	Percent of Total ROS
Primitive (P)	21,333	41%
Semi-Primitive Non-Motorized (SPNM)	17,847	34%
Semi-Primitive Motorized (SPM)	10,759	21%
Roaded Modified (RM)	2,491	5%

The area contains 12 inventoried recreation places that cover 13,372 acres, or 26 percent of the roadless area.

ROS Class	# of Rec. Areas*	Total Acres
P	0	0
SPNM	3	5,201
SPM	5	7,594
RM	6	936

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

There are five public recreation cabins in, or adjacent to, the roadless area. They are located at Castle River, Castle Flats, Kah Sheets Lake, Kah Sheets Bay, and Breiland Slough. The developed trails in the Castle Roadless Area include Castle River Hiking Trail #459 and Kah Sheets Hiking Trail #503.

(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 Castle Roadless Area was given a rating of 25 out of 28 possible points. The rating was re-evaluated for this updated version of the Analysis of the Management Situation. Based on this re-evaluation, the area was also given a rating of 25.

(4) Ecologic and Geologic Values: This area is part of a larger network of roadless areas that includes most of Kuiu and Kupreanof Islands, including the Kuiu Wilderness, Tebenkof Wilderness, and the Petersburg Creek-Duncan Salt Chuck Wilderness.

(a) Fish Resources: The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) listed VCUs 434 and 435, most of the roadless area, as primary producers of salmon and sportfish.

Kah Sheets and Castle River are the most well known stream systems in this area. Castle River and Kah Sheets are noted for good spring steelhead fishing, cutthroat trout fishing throughout the summer and fall, and coho fishing in the late summer.

Castle River has high commercial and sport fish values for coho salmon, steelhead, and cutthroat trout. This area has very good coho salmon smolt production capability. 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 to commercial and sport fishing.

Kah Sheets Creek and Lake have high fish values for coho and sockeye salmon, steelhead, and cutthroat trout. Kah Sheets produces good steelhead fishing in the spring, and sockeye salmon fishing in July. A partial barrier falls 1.5 miles upstream concentrates the sockeye salmon allowing a unique sport fishing opportunity. This area also has very good coho salmon smolt production capability. ADF&G has identified the creek as one of the 65 "important" watersheds for salmon in Southeast Alaska. Fish and recreational opportunities are present throughout the drainage, but are most concentrated from the head of the lake

down to saltwater. The sockeye salmon run in Kah Sheets provides one of the few nearby sport fishing areas for this species for Petersburg residents.

(b) Wildlife Resources: Sitka black-tailed deer and moose are present, and black bears are abundant. 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. Wolves are located across all habitat types. Trapping occurs along the shorelines. A mountain lion was once trapped near Totem Bay west of this roadless area; however, this species is considered a rare migrant on Mitkof and Kupreanof Islands and the Alaska portion of the mainland. Sea otters are migrating into the Inside Passage area and have been sighted in Sumner Strait south of the roadless area.

Red-tailed hawks and sharp-shinned hawks are known to nest in this roadless area, and sandhill cranes are present. Harlequin ducks have been observed on Sumner Strait. Waterfowl and black bear hunting are popular activities in this area. Castle River has high waterfowl hunting values. The mouth of Kah Sheets Creek is an excellent area for waterfowl and black bear hunting.

(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 Steller 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 been seen at Kah Sheets Creek. In addition, twelve sensitive plant species are known or suspected to occur in the Petersburg Ranger District.

(d) Karst, Cave, and Other Geologic Resources: There is a small area of low vulnerability karst at the head of Little Duncan Bay. The karst resources are mapped as 50 acres, or less than 1 percent, of the roadless area. The Castle Islands east of the mouth of Castle River are also karst formations.

(5) Scientific and Educational Values: No unique scientific or educational values in this roadless area have been identified.

(6) Scenic Values: This area appears largely unmodified and natural along Duncan Canal. Portions of the area along Little Duncan Bay and Kah Sheets Bay were harvested along the beach in the mid-1970s and the harvest is visible, although not dominant. The interior is mostly low lying and is not visible, except for the basin around Kah Sheets Lake. Views of timber harvest in the headwaters of Castle River outside of the roadless area, and across Duncan Canal are visible from parts of this roadless area.

Visual Priority Routes and Use Areas identified by the Forest Plan, that area within or adjacent to the area include: Beecher Pass Area, a State Marine Park; Kah Sheets Creek and Lake, which are recommended for Wild, Scenic and Recreational River designation; Beecher Pass, Whiskey Pass, and Duncan Canal, which are small boat routes; Kah Sheets and Little Duncan Bay, saltwater use areas; Kah Sheets Lake, dispersed recreation area; the Forest Service cabins in Castle Flats, Castle River, Breiland Slough, Kah Sheets Bay and Lake; and Kah Sheets Hiking Trail #503 and Castle River Hiking Trail # 459.

About 41 percent of this roadless area is inventoried as Variety Class B (possessing landscape diversity that is common for the character type). The remaining 58 percent is inventoried as Variety Class C (possessing a low degree of landscape diversity).

The majority of this roadless area, 93 percent, is natural appearing, where only ecological change has occurred and has an Existing Visual Condition (EVC) of Type I. One percent of the area has an EVC III, in which the average person notices changes in the landscape, but they do not attract attention. Two percent of the area has an EVC IV, where changes in the landscape are easily noticed by the average visitor, and may attract some attention. About 3 percent of the area has an EVC V, in which changes to the landscape are obvious to the average visitor and dominate the landscape.

(7) Social, Cultural, and Historical Values: The area lies within the traditional territory of the Stikine Tlingit. Known cultural resources in the area include historic period cabins and a barite mine that operated in the area until the 1970s. Though limited archaeological survey has been completed in the area, culturally modified trees and prehistoric period site types that likely occur along the area shoreline include fish traps, villages, and camps. In the 1970s, timber harvest and road construction occurred along portions of the coast and adjacent interior terrain. Several islands included in the area have also been harvested for timber. The area has relatively intensive recreation use for this province. There are recreation cabins and hiking trails that access popular sport and subsistence fishing and hunting spots. VCUs 424 and 435, almost the entire roadless area, are listed among the VCUs with highest sensitivity to disturbance of subsistence use areas. The same VCUs are listed with the VCUs with the highest community use value (ADF&G, 1998).

(8) Manageability as Wilderness and Boundary Conditions/Changes: Castle Roadless Area is surrounded by roadless areas or saltwater on all sides, except for the fringe of developed area along the shore of Kah Sheets Bay and south of Little Duncan Bay. The boundary between this roadless area and the South Kupreanof Roadless Area to the west is not well defined. Management of this area as roadless is influenced by the roads and timber harvest along the shore.

This area is part of a larger network of roadless areas that includes most of southern and eastern Kuiu Island and Kupreanof Island, including the Kuiu Wilderness, Tebenkof Wilderness, and the Petersburg Creek-Duncan Salt Chuck Wilderness. The roadless area could be manageable as a wilderness, especially if combined with the northeastern portion of the adjacent South Kupreanof Roadless Area, which would connect it with the Petersburg Creek/Duncan Salt Chuck Wilderness. Although timber management and road building have occurred along the shore, the harvest units have revegetated. The roads remain and the integrity of the area as a wilderness would improve if these roads were decommissioned and these two areas were added to the roadless area.

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

(1) Recreation, Including Tourism Potential: Recreation potential for the Castle Roadless Area is high due to its proximity to relatively sheltered waters and to Petersburg. Currently there are five recreation cabins and two trails, all of which are heavily used. There is potential for additional recreation cabins, trails, and outfitter and guide permits.

In 1996, the Alaska Visitors Association (AVA) proposed a day use wildlife observatory with capacity for 25 persons per day along the Castle River.

(2) Subsistence Uses: Existing subsistence uses of the area would not be affected by wilderness designation.

(3) Fish Resources: Kah Sheets Creek has been identified as having potential for fish enhancement, through construction of two fish ladders.

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

(5) Timber Resources: There are approximately 20,165 acres mapped as productive old-growth forest in the roadless area. There are also 1,035 acres mapped as second-growth forest resulting from beach harvest in the past. Of these acres, 12,423 acres are categorized as tentatively suitable for timber production. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 3,098 acres, or 6 percent of

this roadless area are estimated to be suitable for timber production. Approximately 1,209 of the suitable acres are mapped as high-volume old growth; of these acres, 318 are mapped as high-volume, coarse-canopy old growth.

(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: Valid mining claims are present near Castle River. A barite mine operated from the 1960s into the 1970s. Information from the U.S. Bureau of Mines indicates the Duncan Canal/Zarembo Island mineral tract has a moderate to high mineral development potential for barite, zinc, lead, and silver.

The roadless area contains 2,952 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals (Coldwell, 1990; USDA Forest Service, 1991). In addition, the roadless area contains an estimated 44,446 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 1,467 of these acres are considered to have moderate potential for development.

(8) Transportation and Utilities: One possible route for a potential powerline connecting the existing powerline on Mitkof Island with the community of Kake would pass just north of the roadless area near Indian Point.

(9) Water Availability and Use: The public recreation cabin at Towers Arm creates a small demand for water. Currently, cabin users must take water from surface sources and treat it before using it. There are no existing or planned hydroelectric or domestic water projects.

(10) Areas of Scientific Interest: The mapped karst resources encompass approximately 50 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: Environmental analysis is currently underway for the installation of communication facilities at a location approximately three miles west of Kah Sheets Lake.

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

IV. Wilderness Evaluation (Need for Wilderness)

(1) Public and Congressional Interest:

(a) Interest Expressed by Local Users and Residents: The areas immediately adjacent to recreation cabins and trails receive moderate to high recreational use. High interest exists by local users in maintaining the area surrounding Duncan Canal in a natural state for recreational use. Remaining lowlands lack interest to the average user.

(b) Congressional Interest: Most of this roadless area was designated as a special management unit by the U.S. Department of the Interior and the Senate Energy Committee in 1979. In 1989, U.S. House of Representatives Bill HR 987 proposed to designate 23 areas as wilderness on the Tongass National Forest. This bill included the Castle Roadless Area as part of the West Duncan Canal Wilderness. In 2001, HR 2908 proposed that the entire roadless area be designated as part of the proposed 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 Castle River and Kah Sheets Creek and Lake areas were among the main areas of concern. The Castle River was recommended for Wild and Scenic status. In 1996, the Alaska Visitor Association proposed a day use wildlife observatory with a capacity of 25 people at Castle River. Timber industry comments supported continued road building and timber harvest.

(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 would like to see development to occur.

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

(f) Public Input Expressed During Supplemental EIS Process: The U.S. Department of the Interior identified this roadless area as one of the 13 roadless areas they considered to have outstanding fish and wildlife values. They indicated that this is one of the few places that humans regularly penetrate inland from the shoreline, following the Castle River upstream.

The Alaska Department of Fish and Game rated the Castle roadless area as the highest priority for protection in the Stikine Area. This rating is based on the VCUs with the highest value fish and wildlife resources needing additional protection. VCUs are prioritized for their very high productivity, essential role in connectivity, and/or very high value as community use areas.

The city of Pelican passed a resolution stating that the important watersheds identified as areas of special interest in the 1999 ROD and HR 987 should given long-term protection.

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 city of Kupreanof recommends the entire Castle River drainage for designation as wilderness.

The Alaska Rainforest Campaign (a coalition of national and Alaska conservation groups) recommended Roadless Area 215 for long-term protection. SEACC placed this roadless area in a high priority for wilderness protection category.

Many individuals identified the Castle River as an area that needed protection. Some individuals recommended the entire area for permanent protection as wilderness, especially because of its high fish and wildlife and recreation values.

(2) Nearby Roadless and Wilderness Areas and Uses: Castle is one of four contiguous roadless areas on the western half of Kupreanof Island. The roadless units on the western half of Kupreanof Island are: Rocky Pass, South Kupreanof, Castle, and North Kupreanof. The Petersburg Creek-Duncan Salt Chuck Wilderness also adjoins these roadless units. Part of this wilderness receives heavy recreational use along Petersburg Creek.

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

Community	Air Miles	Water Miles
Juneau (Pop. 30,711)	120	145
Petersburg (Pop. 3,224)	10	20
Wrangell (Pop. 2,308)	30	30
Ketchikan (Pop. 14,070)	90	100

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

(4) Relative Contribution to the National Wilderness Preservation System: The Castle Roadless Area lies along the southwest shore of Duncan Canal in the southeast corner of the main lobe of Kupreanof Island. It is mostly

northwest of Kah Sheets Bay and includes Castle River estuary and flats. Most of the shoreline along Kah Sheets Bay and areas along Little Duncan Bay are outside the roadless area boundary due to the presence of roads constructed for timber management in the mid 1970s. The roadless area also includes the Castle Islands in Duncan Canal, Kah Sheets and Lung Islands in Kah Sheets Bay, the Level Islands south of Kah Sheets Bay, and other small islands. Landforms along this area are characterized by uniformly-rolling to moderately-steep hills, typically less than 1,500 feet in elevation. The ridges parallel each other in a roughly northwest to southeast direction, with fairly extensive areas of lowlands in between.

The area is mostly unmodified; however, there are fairly extensive logged areas outside the roadless area along the southern shoreline and some areas of beachlogging elsewhere. These older harvested areas are mostly natural appearing as they mature. The natural integrity and apparent naturalness is considered very high for the area. The opportunity for solitude is very high and the opportunity for primitive recreation is outstanding.

None of the area is rated as distinctive for the character type from a scenery perspective. The area has some areas of karst. Cultural and historic values are found in the area. The area also has five public recreation cabins.

The roadless area includes about 6,312 acres of high-volume, old-growth forest. Of these acres, 1,900 are mapped as high-volume, coarse-canopy old growth.

The Castle Roadless Area is classified as being in the Kupreanof/Mitkof Islands Biogeographic Province and makes up about 6 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 Castle Roadless Area lies completely within the Kupreanof Lowlands Ecological Section and represents 5 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 (64 percent) of the roadless area is in the Duncan Canal Till Lowlands Ecological Subsection; this portion of the roadless area represents 14 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 Sumner Strait Volcanics Ecological Subsection comprises the remainder (36 percent) of the roadless area. This portion of the roadless area represents 5 percent of the entire ecological subsection, minor portions of which are protected by existing wilderness and LUD II (0.1 percent and 1 percent, respectively) and by other existing non-development LUDs (32 percent).

The Castle Roadless Area was rated 25 out of a possible 28 points under the Wilderness Attribute Rating System (WARS). As such, its WARS rating is ranked 12th from the highest (along with 12 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, and there is similar support for designating the area as wilderness. Designation of the area as wilderness would add Congressional protection to approximately 5 percent of the Sumner Strait Volcanics Ecological Subsection that that has very little area represented in wilderness or LUD II. Designation would create a wilderness that by itself would include an area more associated with the shoreline and the lower portions of watersheds such as the Castle River. The Castle Roadless Area may be more valuable for wilderness if considered in conjunction with part or all of the South Kupreanof Roadless Area to the west and north. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System by itself would be moderate and high in conjunction with all or portions of the South Kupreanof Roadless Area.

V. Environmental Consequences

The Castle Roadless Area would be managed under the existing Forest Plan if Alternative 1 or 2 is implemented. Approximately 57 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur in the remaining 43 percent. The land in the development LUDs provides an estimated 3,098 acres that are suitable for timber production (2 percent of the suitable acres on the Petersburg Ranger District). Approximately 318 of the suitable acres are identified as high-volume, coarse-canopy old growth. The roadless area contains 2,952 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. In addition, the roadless area contains an estimated 44,446 acres of undiscovered locatable mineral resources; 1,467 of 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 activities and developments. Cultural and historic values, and the recreation cabins of the area are protected by the Forest Plan.

Under Alternatives 3 or 5, a 32,378-acre portion of the area in Old-growth Habitat, Semi-remote Recreation, Wild/Scenic/Recreation River, 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 in the Recommended Wilderness area. Lands suitable for timber production would be reduced to approximately 657 acres. The values associated with the natural settings of the northern half of the roadless area would be provided long-term protection if designated wilderness.

Under Alternative 4, an 18,513-acre portion of the Old-Growth and Semi-remote Recreation LUDs would be converted to Recommended Wilderness. This would not affect timber sale projects because this area is currently allocated to non-development LUDs. The total area suitable for timber production would not change from Alternative 1. The timber sales, recreation, minerals, and special use programs could continue outside the Recommended Wilderness area, but may be restricted within the area. The values associated with the natural settings of the northernmost portion of the roadless area would be provided long-term protection if designated wilderness.

Under Alternatives 6, 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 as wilderness would add Congressional protection to approximately 5 percent of the Sumner Strait Volcanics Ecological Subsection that that has very little area represented in wilderness or LUD II. The values associated with the natural settings of the roadless area would be provided long-term protection if designated wilderness.

Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 215 (in acres)								
Land Use Designation	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 4**	**Alt 5**	**Alt 6**	**Alt 7**	**Alt 8**
Recommended Wilderness			32,378	18,513	32,378	52,432	52,432	52,432
Wilderness								
Recommended Wilderness Nat. Mon.								
Wilderness National Monument								
Non-wilderness National Monument								
Research Natural Area								
Special Interest Area								
Remote Recreation								
Enacted Municipal Watershed								
Old-growth Habitat	11,566	11,566						
Semi-remote Recreation	14,798	14,798	7,136	7,852	7,136			
Recommended LUD II								
LUD II								
Wild, Scenic, Recreational River	3,460	3,460	3,437	3,460	3,437			
Experimental Forest								
Scenic Viewshed	4,813	4,813	43	4,813	43			
Modified Landscape	8,355	8,355	4	8,355	4			
Timber Production	9,440	9,440	9,434	9,440	9,434			
TOTAL	**52,432**	**52,432**	**52,432**	**52,432**	**52,432**	**52,432**	**52,432**	**52,432**
Suitable Timber Lands	3,098	3,098	657	3,098	657	0	0	0