

## INDIVIDUAL ROADLESS AREA DESCRIPTION

**ROADLESS AREA NAME:** Kosciusko (515)

**ACRES (NFS):** 71,578

**BIOGEOGRAPHIC PROVINCE:** North Central Prince of Wales Island

**ECOLOGICAL SECTION:** Kuiu-Prince of Wales Fjordlands

**2003 WILDERNESS ATTRIBUTE RATING:** 24

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

(1) **Location and Access:** The Kosciusko Roadless Area is on Kosciusko Island, near the northwest end of Prince of Wales Island. It is approximately 45 air miles from Hollis, currently the closest stop on the Alaska Marine Highway. A second ferry port in Coffman Cove should be operational in 2003. Areas developed for timber management have been minimal within the majority of this roadless area, but has occurred just beyond the boundary of the roadless area, particularly in the Trout Creek drainage on Kosciusko Island and on Prince of Wales, across from El Capitan Passage. Sumner Strait and Shipley Bay lie to the northwest, El Capitan Passage to the east, and Davidson Inlet and Token Bay to the south. The roadless area also includes several islands between Davidson Inlet and Token Bay. Access to this island is by boat and by floatplane. There are no places suitable for landing wheeled airplanes. Once on the island, several roads extend to near the boundary of the roadless area. Access away from water and roads is by helicopter or foot. One developed trail and one Forest Service cabin are located in Shipley Bay. The trail is in poor condition.

(2) **History:** The coastal area was used by prehistoric and historic Native cultures. The permanent Tlingit village of Shakan was located adjacent to this area. Many traditional use sites and seasonal camps used out of Shakan are located here. Karst development in the area (caves), elevate the area to high sensitivity for cultural resources. The west coast area is known to have been used by the Russians for trading with the Natives. There is some evidence of early day hand-logging along several of the sheltered bays. Marble mining occurred in the Dry Pass area early in the last century. Marble mining on nearby Marble Island is ongoing. Approximately 60 per cent of the roadless area was designated LUD II by Congress in the 1990 Tongass Timber Reform Act.

(3) **Geography and Topography:** This area is within the low mountain arc of the Pacific Mountain system. A number of peaks in the roadless area range in elevation from 2,300 to over 3,100 feet. Numerous small streams drain to saltwater and to the several freshwater lakes within this roadless area. Shipley Lake is the largest freshwater lake. The highlands surrounding Mount Francis and the coastal area adjacent to Sumner Strait and Shipley Bay are underlain by limestone into which extensive karst systems have developed. The density of karst features and the level of development are similar to that of Bald Mountain within the Christoval Roadless Area (508). Karst has also developed along the ridgetop in the extreme northeastern corner of the area and on the islands to the south. There are 645 acres of lakes, 193 miles of shoreline on saltwater, 3,085 acres of alpine tundra, and 443 acres of rock. This area contains 6,187 acres of islands and islets. Six of these islands are over 100 acres and two are over 1,000 acres.

(4) **Ecosystem:**

(a) **Classification:** Biogeographic Province. The area is in the North Central Prince of Wales Island Biogeographic Province. This province is characterized by rolling, gentle landforms but with localized rugged topography. Karst topography underlies approximately 9 percent of the roadless area; the ecological effects of the karst processes are especially noticeable in the Trout Creek watershed. Limestone is common and overall forest productivity is high. Karst topography and caves are present. Precipitation is relatively low due to interception by lands to the south and southwest.

## Appendix C

**Ecological Section/Subsection.** The Kosciusko Roadless Area is contained entirely within Kuiu-Prince of Wales Fjordlands Ecological Section (247F). This area is represented by three ecological subsections (see table below). The Kuiu-Prince of Wales Granitics Ecological Subsection (47% of roadless area) contains rugged mountaintops of igneous rock that rise above rounded peaks, capturing incoming precipitation which remains as snowpack much of the year. Moderately productive hemlock forests are found below the alpine. The North Prince of Wales Complex Ecological Subsection (41% of roadless area) is characterized by rolling hills and wide U-shaped valleys underlain by non-carbonate conglomerate and granodioritic rocks. Productive hemlock and hemlock-spruce forests comprise about two thirds of the landscape, and the remainder is low productive mixed-conifer and lodgepole pine forested wetlands. The North Prince of Wales-Kuiu Carbonates Ecological Subsection is characterized by low-elevation hills and mountain slopes underlain by limestone and marble karstlands. Hemlock and hemlock-spruce forests are found on karst soils, which can be highly productive (Nowacki et al., 2001).

<b>Ecological Section</b>	<b>Ecological Subsection</b>	<b>Percent of Roadless Area</b>
Kuiu-Prince of Wales Fjordlands	Kuiu-Prince of Wales Granitics	47%
	North Prince of Wales Complex	41%
	North Prince of Wales-Kuiu Carbonates	11%

**(b) Soils:** Soils are generally formed over bedrock and are typically about 40 inches deep. Generally, steeper areas have better-drained soils and flat areas are poorly drained. Some of the soils in the area are derived from limestone.

**(c) Vegetation:** Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily western hemlock and Sitka spruce, with large components of cedar. There are numerous interspersed areas of muskeg vegetative. Approximately 1,791 acres of muskeg are mapped for the area; however, due to their small size and association with forested sites, accurate acreage estimates are difficult. Areas above 2,000 feet support alpine vegetation and approximately 3,085 acres of alpine vegetation are mapped for the area.

There are approximately 64,580 acres mapped as forest land of which 40,810 acres or 63 percent are mapped as productive old-growth forest. Of the productive old growth, 22,576 acres or 55 percent are mapped as high-volume old-growth forest. The productive old growth includes about 9,364 acres of high-volume, coarse-canopy old growth. There are 716 acres of second growth associated with older beach logging.

**(d) Fish-Resource:** Coho, pink, chum, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char inhabit the lakes and streams in this area. The major fish-bearing waters identified by the Anadromous Waters Catalogue (ADF&G, 2000) include Trout Creek, Shipley Bay Creeks and Lake, Token Bay Creeks, and Davidson Inlet Creeks.

**(e) Wildlife Resources:** Sitka black-tailed deer, black bear, wolves, mink, and bald eagles are among the species that inhabit the area. There is good alpine habitat for ptarmigan. Moose inhabit Prince of Wales and Kosciusko Islands (MacDonald and Cook, 1999).

**(5) Management Direction and Current Uses:** This roadless area was allocated to five different Land Use Designations (LUDs) under the 1997 Tongass Land and Resource Management Plan. These five LUDs are Timber Production, Modified Landscape, LUD II, Old-growth Habitat, and Semi-remote Recreation.

<b>LUD</b>	<b>Acres</b>
Timber Production	16,264
Modified Landscape	832
LUD II	43,265
Old-growth Habitat	8,025
Semi-remote Recreation	3,191

Approximately 24 percent of the roadless area was allocated to development LUDs, which allow timber harvest and the associated road construction (Timber Production, Modified Landscape). The Timber Production LUD was assigned to approximately 23 percent of the roadless area. Both sides of Marble Pass were allocated to the Modified Landscape LUD, which accounts for approximately 1 percent of the roadless area.

Approximately 76 percent of this roadless area was allocated to a non-development LUD (LUD II, Old-growth Habitat, Semi-remote Recreation). Most of this area, approximately 60 percent, was allocated to the LUD II designation. This LUD creates the Mount Calder/ Mount Holbrook LUD II area, which is one of the 12 areas that were allocated to permanent LUD II status under the Tongass Timber Reform Act of 1990. Approximately 11 percent of the roadless area was allocated to the Old-growth Habitat LUD. Groups of islands between El Capitan Passage and Token Bay were allocated to the Semi-remote Recreation LUD, which account for 4 percent of the roadless area.

Recreation use is not well documented except for use occurring at the Shipley Bay Cabin. NRRS reports show that Shipley Bay Cabin received 76 visitors in FY 2001. Hiking and sea kayaking occur within the area. Whale watching and wildlife viewing opportunities are abundant. No outfitter/guide permits were issued for the roadless area during 2000. In 1996, the Alaska Visitor Association (AVA) proposed an overnight wildlife observatory for 50 people and a backcountry recreation lodge for 50 people along the El Capitan Passage. The roadless area receives some subsistence use, primarily in Shakan Bay; however, none of the VCUs in the roadless area are listed among the VCUs with the highest community fish and wildlife values. The Shakan molybdenite prospect, associated known molybdenum-copper deposits near the old town site of Shakan, and the El Cap gold prospect adjacent to Tokhini Creek (north of Devilfish Bay) show promise for mineral development within the roadless area.

**(6) Appearance (Apparent Naturalness):** This area has a high scenic quality that is dominated by the mountain geography of Mt. Francis, the Nipples, and Mt. Holbrook, and by coastal scenery at Shipley Bay, Devilfish Bay and the surrounding Island. Shipley Lake, steep alpine areas, and vast lowland muskeg areas also add to scenic quality. The area is unmodified except for the recreation cabin on Shipley Bay and some older beach logged areas that have regrown and appear natural.

**(7) Surroundings (External Influences):** Pockets of developed land along Token Bay, Devilfish Bay, and Shakan Strait are not considered part of the roadless area even though they are part of the Congressionally designated Mt. Calder-Mt. Holbrook LUD II Area. The south and southwest boundaries are defined by developed areas. Developed areas also lie to the east across El Capitan Passage and to the south.

**(8) Attractions and Features of Special Interest:** The mountains and peaks are special attractions of the area. High quality scenery; good boating opportunities in the sheltered saltwater bays and inlets such as Dry Pass; good opportunities to view whales and other wildlife; primitive recreational opportunities that include hiking, caving, exploration, solitude, challenge, camping, fishing, sea kayaking, hunting, and subsistence use; interpretation and education of the cultural resources in the area; and study of the natural processes which formed this area are all special attractions. There is a public recreation cabin on the shore of Shipley Bay and a trail that leads to Shipley Lake. The area contains 27 inventoried recreation places, which cover 33,622 acres, or 47 percent of the roadless area.

**(9) Differences between the 1989 and 2003 Roadless Area Boundary:** Harvested, but unroaded, areas along the shore have been added to the roadless area. Trees have re-grown in these beach-logged areas and they no longer dominate the vista. Other changes resulted from more accurately mapping of the developed areas. Several smaller areas along the developed boundaries have been excluded between the Draft and Final SEIS to improve the potential manageability of the area as wilderness.

## **II. Capability for Management as Wilderness**

**(1) Natural Integrity and Apparent Naturalness:** The area is unmodified except for the recreation cabin on Shipley Bay and older beach logged areas that have regrown. This area has very high natural integrity and apparent naturalness and is suitable for wilderness classification. Some developed areas exist in west Kosciusko, Marble, and Orr Islands; however, this has a low impact on the overall natural integrity of the landscape.

## Appendix C

**(2) Opportunity for Solitude and Serenity, Self-reliance, Adventure, Challenging Experiences, and Primitive Recreation:** There are very high opportunities for solitude, serenity, self-reliance, adventure, challenge, and primitive recreation especially in the steep, mountainous terrain, in alpine and sub-alpine areas, along the shore and uplands of the coast, within isolated caves, and on the deserted islands within the area. The rugged terrain, with many isolated lake or alpine basins, enhances the opportunity for solitude. Present recreation use levels are low; even the public recreation cabin at Shipley Bay is not heavily used. Floatplanes and boats used to transport people to the Shipley Bay cabin may occasionally disturb users. A person camping within the roadless area is unlikely to see others.

Several portions of this area provide excellent opportunities for primitive recreation due to their remoteness and scenic and recreation attractions, including lakes, scenic alpine areas, and protected saltwater bays. 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 presence of karst features such as vertical pits, the isolation and distance from population centers with medical facilities, the barriers to communication, and the presence of large wild animals all contribute to the need for good preparation and knowledge of backcountry survival skills for anyone using this area. Hypothermia and bear encounters are just two examples of the many risks that must be considered before traveling in the backcountry of southeast Alaska.

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

ROS Class	Acres	Percent of Total ROS
Primitive (P)	10,541	15%
Semi-Primitive Non-Motorized (SPNM)	41,944	59%
Semi-Primitive Motorized (SPM)	13,116	18%
Roaded Natural (RN)	334	0%
Roaded Modified (RM)	5,489	8%

The area contains 27 inventoried recreation places, which cover 33,622 acres, or 47 percent of the roadless area.

ROS Class	# of Rec. Places*	Total Acres
P	2	6,147
SPNM	8	19,305
SPM	11	6,364
RN	1	334
RM	12	1,472

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

The only developed recreation facility is a public recreation cabin at Shipley Bay.

**(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).

In 1979, during the RARE II process, the Tongass National Forest applied WARS for the first time and rated each unroaded VCU on the Tongass. In 1989, the inventoried roadless areas (which generally include more than one VCU) were rated according to this system for the Analysis of the Management Situation (AMS) developed in support of the Forest Plan Revision. This original version of the AMS included both the individual VCU ratings done in 1979 and the composite rating that was done for each roadless area in 1989. The 1989 rating for the

Kosciusko Roadless Area was 23 out of 28 possible points. The 1989 rating was re-evaluated for this updated version of the AMS. Based on this re-evaluation, the area was given a rating of 24.

**(4) Ecologic and Geologic Values:** Karst and cave formations in the limestone underlying this roadless area may be of national and international significance because of their complexity, the resources they contain, and intense development. Littoral caves along the outer coast contain important deposits. The roadless area contains productive fish and wildlife habitat.

**(a) Fish Resources:** The Tongass Fish and Wildlife Resource Assessment (ADF&G, 1998) lists two of the fifteen VCUs, 546 and 548 on Sea Otter Sound and Tokeen Bay as primary salmon producers, and VCU 537.2 as a non-producer. No VCUs were listed as primary sport fish producers (ADF&G 1998).

Coho, pink, chum, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden char inhabit the lakes and streams in this area. The major fish-bearing waters identified by the Anadromous Waters Catalogue (ADF&G, 2000) include Trout Creek, Shipley Bay Creeks and Lake, Tokeen Bay Creeks, and Davidson Inlet Creeks. Charley Creek and Tokeen Creek receive an estimated peak escapement of 95,600 and 59,700 pink salmon, respectively (ADF&G, 1998). Shipley Creek and Lake, in VCU 541, lie within the Mt. Calder-Mt. Holbrook Legislated LUD II area. The stream system supports a sockeye fishery, and fishing is also good for cutthroat, rainbow, steelhead, Dolly Varden char, pink and chum salmon.

**(b) Wildlife Resources:** Sitka black-tailed deer, black bear, wolves, mink, and bald eagles are among the species that inhabit the area. There is good alpine habitat for ptarmigan. Moose sign has been reported on Prince of Wales Island, but brown bear and mountain goats do not.

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

**(d) Karst, Cave, and Other Geologic Resources:** Karst and cave formations in the limestone underlying this roadless area may be of national and international significance because of their complexity, the resources they contain, and intense development. Extensive inventories in this area have yielded some of the highest density of caves found throughout the Alexander Archipelago. Sub-alpine fir can be found on the ridge crests in protected alcoves. The karst systems found here extend from the alpine to the sea providing increased productivity for the plant, animal, and aquatic communities found on the karst lands. Littoral caves along the outer coast contain important paleontological and cultural deposits. Karst resources represent 6,366 acres, or 9 percent, of the roadless area. About 30 percent of the karst is mapped as high vulnerability karst. There are no glaciers or other unique geologic features in this area. Portions of the area are thought to have been ice-free during the last glacial episode and are the subject of research to determine the ecology of the outer coast during the last glacial period and the extent and timing of glaciation.

**(5) Scientific and Educational Values:** There are opportunities to study forests, wildlife, fish, plants, glacial history, and karst formations. Karst and cave formation in the limestone underlying this roadless area are of national and international significance because of their development, complexity, the resources they contain, and their level of development. The closest educational institutions are in the communities of Craig, Klawock, and Naukati. However, due to the uniqueness of this area, much research has been focused here.

## Appendix C

**(6) Scenic Values:** This area is part of the Kupreanof Lowlands character type which is characterized by predominantly low, rolling relief, with elevations seldom greater than 1,500 feet. Numerous island groups and intricate waterways are also common in this character type. Much of this roadless area includes terrain that is much more rugged and diverse than is common in the character type.

A natural landscape dominates the view of the roadless area from the surrounding waterways and important use areas identified in the Forest Plan. Also, once in the roadless area, the landscape remains scenic and unmodified, except directly surrounding the recreation cabin site. Outstanding scenic features include the landscape around Mount Francis, the highly diverse terrain around the Nipples, and, particularly the Odd Rock Creek drainage with its scenic meadows and dramatic steep slopes enclosing this meadow.

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; Sea Otter Sound, a small boat route; the Token Bay, Davidson Inlet, Shaken Bay, Shaken Strait, Dry Pass, El Capitan Pass and Marble Pass saltwater use areas; and the Shipley Lake public recreation cabin. The area around Kosciusko receives touring boat traffic and is also occasionally frequented by small (less than 100 passenger) cruise ships. Visitation is moderate and the area is popular due to the rugged scenery and protected waterways around Sea Otter Sound, Shipley Bay, El Cap Pass, and Sumner Strait. Whale watching in these areas is very good in the summer months and is enjoyed by people on private fishing charters, personal craft, and small cruise ships.

About 31 percent of this area is inventoried as Variety Class A, which possess a high level of landscape diversity unique for Kupreanof Lowland character type. Terrain features, geologic features, and water features all exhibit high visual diversity within this area. Most of this area, 66 percent, is inventoried as Variety Class B, which have features common for the landscape character type. Another 1 percent of the area is in Variety Class C, which have a low degree of landscape diversity. Approximately 3 percent of the area was not inventoried for Variety Class type.

Most of this area, approximately 72 percent, is in a Type I Existing Visual Condition (EVC), where the natural landscape has remained unaltered by human activity. About 4 percent of the area has an EVC III, where changes in the landscape are seen by the average person, but they do not dominate the landscape. Land where alterations to the landscape are obvious but tend to blend with natural landscape features (EVC IV) are found on about 12 percent of the area. About 9 percent of the area has an EVC V, where changes to the landscape are obvious to the average visitor and appear to be major disturbances. Approximately 3 percent of the area was not inventoried for EVC.

**(7) Social, Cultural and Historical Values:** The coastal area was used by prehistoric and historic Native cultures. The permanent Tlingit village of Shakan was located adjacent to this area. Many traditional use sites and seasonal camps used out of Shakan are located here. Karst development in the area (caves) elevates the area to high sensitivity for cultural resources. The west coast area is known to have been used by the Russians for trading with the Alaska Native people. There is some evidence of early day hand logging along several of the sheltered bays. Marble mining occurred in the Dry Pass area early in the last century and currently is ongoing on nearby Marble Island. Recreation use is low, even at the public recreation cabin in Shipley Bay, due to the high cost of accessing the area. No outfitter/guide permits were issued for the roadless area during 2000. The roadless area receives some subsistence use, primarily in Shakan Bay. VCU 546 on Sea Otter Sound was listed among the VCUs with the highest community use value. VCU 549.1, along El Capitan Passage, was listed in the second most important group. All VCUs were listed among the VCUs with the highest sensitivity to disturbance of subsistence use areas (ADF&G, 1998). The Shakan molybdenite prospect, associated known molybdenum-copper deposits near the old town site of Shakan, and the El Cap gold prospect adjacent to Tokhini Creek (north of Devilfish Bay) are found in the roadless area. In 1996, the AVA proposed an overnight wildlife observatory for 50 people and a backcountry recreation lodge for 50 people along the El Capitan Passage.

**(8) Manageability as Wilderness and Boundary Conditions/Changes:** Most of the area is well-defined by saltwater. The southwest boundary is defined by a developed area at the base of Mount Francis. There are three other enclaves of developed areas in the east. The lack of well-defined topographic boundaries could reduce the area's manageability as a wilderness. The feasibility of managing the roadless area as a wilderness might be improved somewhat if the southwest boundary were moved to the LUD II boundary east of Mount Francis.

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

(1) **Recreation, including Tourism Potential:** Tourism has been increasing in Southeast Alaska and is expected to continue to increase. The roadless area is somewhat isolated and recreation use levels are low; however, the recreation and tourism potential of this area is high. Sea kayaking, whale watching, wildlife viewing, camping, hiking, and exploring have the potential to increase as tourism and recreation increase throughout Alaska. Tourism potential is a major part of Alaska's economy. The industry attracts over 1.1 million visitors annually. There has been a growing recognition that tourism depends on scenic quality, wildlife, and wilderness (Behnke, 1999).

Potential exists for trail construction, additional recreation cabins, and anchor buoys throughout this area. Karst and cave development in the roadless area may provide a unique opportunity to develop destination recreation facilities in association with interpretation and viewing of these features and topography. El Capitan Passage and Dry Passage are part of an identified kayak and small boat route along the west coast of Prince of Wales Island. A few potential three-sided shelter sites have been noted along this route within this roadless area.

In 1996, the AVA proposed the following recreation development for Shaken Bay, a day-use recreation facility for 300 people, and for El Capitan Passage: an overnight wildlife viewing observatory for 50 people/day and a backcountry recreation lodge for 50 people.

(2) **Subsistence Uses:** Management as a wilderness would not conflict with current subsistence uses.

(3) **Fish Resources:** No fish enhancement projects are currently planned within the roadless area.

(4) **Wildlife Resources:** No wildlife enhancement projects are currently planned within the roadless area.

(5) **Timber Resources:** There are 40,810 acres mapped as productive old-growth forest and 716 acres mapped as second-growth forest in the roadless area. Of this, approximately 12,793 acres are categorized as tentatively suitable for timber harvest. Based on the Forest Plan LUDs assigned to this area (and estimated falldown and scheduling reduction factors), 3,013 acres or 4 percent of this roadless area are estimated to be suitable for timber production. Approximately 1,515 of the suitable acres are mapped as high-volume old growth; of these acres, 704 are mapped as high-volume, coarse-canopy old growth. Managing timber in most of the roadless area would require extending the existing road system into the roadless area. The area to the southwest and to the east, have road networks and the necessary sites for transferring logs to saltwater.

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

(7) **Minerals:** This area contains 26,591 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, this area contains 44,521 acres of undiscovered locatable mineral resources (Brew et al., 1990; USDA Forest Service, 1991); 44,381 of these acres are considered to have moderate potential for development.

One inactive claim is located within the area. Potential exists for development of the limestone and marble resources. Part of the Shipley River corridor lies within the U.S. Bureau of Mine's El Capitan Pass Minerals Tract where copper, molybdenum and uranium are present. The USGS Mineral Resources Data website indicates there are several prospects in the area for copper, molybdenum, zinc and lead.

(8) **Transportation and Utilities:** There are no existing or planned transportation or utility corridors within, or adjacent to, the roadless area.

(9) **Water Availability and Use:** The only source of water demand is from the public recreation cabin on Shipley Lake. There are no existing or planned hydroelectric or domestic water projects within the roadless area.

## Appendix C

(10) **Areas of Scientific Interest:** The wildlife, fish, plants, glacial history, and karst formations are of interest. Karst and cave formation in the limestone underlying this roadless area are of national and international significance because of their development, complexity, the resources they contain, and their level of development. The karst and high elevation areas are of high interest and may play a major part in rewriting the glacial history of SE Alaska. Geologically, paleontologically, and archaeologically significant investigations are just beginning to yield previously unknown facts about the advance of the last ice age. The mapped karst resources encompass approximately 6,366 acres or nine percent of the roadless area.

(11) **Land Use Authorizations:** There are no special use authorizations within the roadless area.

(12) **Land Status:** The entire area is National Forest System land.

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

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

(a) **Interest Expressed by Local Users and Residents:** Local interest is primarily in maintaining the area for subsistence fishing, and hunting.

(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. A portion of the roadless area was designated as LUD II by the Tongass Timber Reform Act of 1990. In 2001, HR 2908 proposed managing the entire roadless area as LUD II in an unroaded condition.

(c) **Public Input During Forest Plan Revision and Appeals:** The Sumner Strait Fish and Game Advisory Board and local residents recommended that the area be dedicated to subsistence uses. The Southeast Alaska Conservation Council (SACC), many local residents, and others recommended against additional road building and logging, especially along the narrow and scenic El Capitan Passage. The SACC stated that the area merited special protection for its outstanding wildlife, fisheries, hunting, subsistence, recreation, and tourism values. The Alaska Rainforest Campaign and SACC recommended LUD II or similar protection. The Alaska Forest Association, the Alaska Miners Association, and the AVA recommended that no new wilderness be designated on the Tongass National Forest. The Alaska Miners Association wanted the area managed as a Mineral LUD. Others stated that all unroaded areas should be designated wilderness. Timber industry representatives recommended managing all areas not designated as wilderness for timber. In 1996, the AVA proposed an overnight wildlife observatory for 50 people and a backcountry recreation lodge for 50 people along the El Capitan Passage.

(d) **Public Input During Roadless Area Conservation Rule and Road Management Policy Review:** This area was not specifically identified in the public comments received during the Roadless Area Conservation Rule or Road Management Policy Review. However, some commenters wanted all unroaded lands on the Tongass to be protected from development.

(e) **Public Input Expressed for Project-level EISs and Other Input:** No project-level comments on this roadless are available.

(f) **Public Input Expressed During Supplemental EIS Process:** The U.S. Department of the Interior identified this roadless area as having important fish and wildlife habitat and populations; although not a top priority for protection, it ranked in their top third among all roadless areas.

The Alaska Department of Fish and Game rated the Kosciusko roadless area (VCUs 536, 541, 542, 548, and 549) as the sixth highest priority for protection on Prince of Wales Island and Adjacent Islands. 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.

SEACC recommended this area be designated as LUD II.

One individual noted how impacted the karst of Kosciusko Island were, but noted that, in 1998, a team documented nearly 50 new caves, many with relatively horizontal passages – an unusual feature among Southeast Alaskan caves. He stated that Kosciusko Island will be critical for its karst biology and will shelter numerous unique and possible new species of cave-adapted invertebrates.

A number of cave/karst experts and other individuals stated that the North Central Prince of Wales Biogeographic Province contains the most celebrated and explored caves and karstlands in the Tongass; Kosciusko and Calder Roadless Areas include spectacular limestone massifs and caves as well as remnants of high volume old growth karstland forest. The Karst Waters Institute considers Kosciusko Island Karst to be one of the 10 most endangered karst areas worldwide. The commenters indicated that these Roadless Areas, 515, 516, and 517, together with contiguous karstlands in Roadless Area 518, could be combined to create a karst reserve/wilderness that would be renowned throughout the world.

A number of individuals identified the 1999 additions to the Calder Holbrook area as needing protection. Some commented on the need for protection of Shakan Bay and Shipley Bay. Some individuals recommended this area for permanent protection as wilderness and some for LUD II.

**(2) Nearby Roadless and Wilderness Areas and Uses:** This roadless area is separated from the Calder Roadless Area by Shakan Strait. Portions of both roadless areas are part of the Congressionally-designated Mt. Calder-Mt. Holbrook LUD II Area. The El Capitan Roadless Area (517) lies to the northeast and the Sarkar Roadless Area (514) lies to the east. Both are on Prince of Wales Island. The Kuiu Bay Wilderness lies approximately 10 miles to the west, across the Sumner Strait. Recreation and subsistence are the main uses for these areas. Use levels are generally low. Coronation Island and Warren Island Wildernesses lie to the west and southwest, respectively.

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

Community	Air Miles	Water Miles
Ketchikan (Pop. 14,070)	75	130
Wrangell (Pop. 2,308)	45	65
Petersburg (Pop. 3,324)	50	70
Juneau (Pop. 30,711)	155	160

Hollis, approximately 45 air miles and 120 road miles to the southeast, currently is the nearest stop on the Alaska Marine Highway.

**(4) Relative Contribution to the National Wilderness Preservation System:** The Kosciusko Roadless Area is on Kosciusko Island, near the northwest end of Prince of Wales Island. Sumner Strait and Shipley Bay lie to the northwest, El Capitan Passage to the east, and Davidson Inlet and Token Bay to the south. The roadless area also includes several islands between Davidson Inlet and Token Bay. This area is within the low mountain arc of the Pacific Mountain system. The maximum elevation is 3,100 feet. Much of the area is underlain by limestone and extensive karst has developed here. Numerous small streams drain to saltwater and there are several freshwater lakes within this roadless area. Shipley Lake is the largest freshwater lake.

The area is mostly unmodified and in a natural condition. The natural integrity and apparent naturalness is very high. The opportunity for solitude and primitive recreation is also considered to be very high within the area.

The Kosciusko Roadless Area has very high scenic quality; approximately 31 percent of the landscape is considered distinctive from a scenery standpoint. Karst and cave formations in the limestone underlying this roadless area may be of national and international significance because of their complexity and the resources they contain. Littoral

## Appendix C

caves along the outer coast contain important paleontological and cultural deposits. Portions of the area are thought to have been ice-free during the last glacial episode and are the subject of research to determine the ecology of the outer coast during the last glacial period.

The roadless area includes about 22,576 acres of high-volume, old-growth forest. Of these acres, approximately 9,364 are mapped as high-volume, coarse-canopy old growth.

The Kosciusko Roadless Area is classified as being in the North Central Prince of Wales Island Biogeographic Province and makes up about 5 percent of the province. It is one of 15 inventoried roadless areas found within the province, which make up about 44 percent of the province. The Karta River Wilderness makes up about 3 percent of the province, and three designated LUD II areas (Mt. Calder-Mt. Holbrook, Pt. Baker-Port Protection, and Salmon Bay) make up about 5 percent of the province.

The Kosciusko Roadless Area lies completely within the Kuiu-Prince of Wales Fjordlands Ecological Section and represents 7 percent of the ecological section. Approximately 13 percent of the Kuiu-Prince of Wales Fjordlands Ecological Section is in existing wilderness, 8 percent is in existing LUD II, and an additional 33 percent is protected by other existing non-development LUDs.

Approximately half (47 percent) of the roadless area is in the Kuiu-Prince of Wales Granitics Ecological Subsection; this portion of the roadless area represents 23 percent of the entire ecological subsection, 19 percent of which is protected in existing wilderness, 23 percent in existing LUD II, and 36 percent by existing non-development LUDs. Forty-one percent of the roadless area is in the North Prince of Wales Complex Ecological Subsection; this portion of the roadless area represents 36 percent of the entire ecological subsection, 28 percent of which is in existing LUD II and 18 percent is protected by existing non-development LUDs. The balance (11 percent) of the roadless area is in the North Prince of Wales-Kuiu Carbonates Ecological Subsection; this portion of the roadless area represents 3 percent of the entire ecological subsection, 2 percent of which is in existing LUD II and 25 percent is protected by other existing non-development LUDs.

The Kosciusko 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 25<sup>th</sup> from the highest (along with 4 other roadless areas) among the 109 Tongass inventoried roadless areas.

There is both local and national support for managing the roadless area in an unroaded condition, and some support for designating the area as a wilderness. Designation would create a wilderness that would contain relatively large areas of well-developed karst that also included important paleontological and cultural information, and where extensive investigation and research is ongoing. The degree of timber harvest in adjacent lands adds importance to the old growth within the roadless area. Overall, the factors identified here indicate that the relative contribution of this area to the National Wilderness Preservation System would be high to very high.

### **V. Environmental Consequences**

The Kosciusko Roadless Area would be managed under the existing Forest Plan if Alternative 1, 3, or 4 is implemented. Approximately 76 percent of the roadless area would be managed under non-development LUDs. Timber harvest and road development could occur within the remaining 24 percent of the roadless area. The land in the development LUDs includes an estimated 3,013 acres that are suitable for timber production (2 percent of the suitable acres on the Thorne Bay Ranger District). Approximately 704 of the suitable acres are classified as high-volume, coarse-canopy old growth. This area contains 26,591 acres of land identified as a mineral activity tract having a high potential for experiencing mineral exploration and development of locatable minerals. In addition, this area contains an estimated 44,521 acres of undiscovered locatable mineral resources; 44,381 of these acres are considered to have moderate potential for development. Karst and cultural resource investigation and research activities would continue. The recreation and special use programs would continue. The values associated with the natural settings of the roadless area are mostly protected by the Forest Plan. The high cultural, karst, and most old growth and scenic values are protected under the Forest Plan.

## Appendix C

Under Alternative 2, all of the existing LUD II area would be converted to Recommended Wilderness LUD. This would not affect timber management because this area is currently allocated to a non-development LUD. The total area suitable for timber harvest would not change from Alternative 1. Ongoing karst, cultural resource, recreation, special use, and minerals programs could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the existing LUD II portion of the roadless area, including the scenic, karst, old growth, and cultural values, would be provided long-term protection if designated wilderness.

Under Alternative 5 and 7, a 58,214 acre portion of the existing LUD II, Old-growth Habitat, and Semi-remote Recreation, would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed in the Recommended Wilderness LUD and the area classified as suitable for timber production would decrease to approximately 1,185 acres. Ongoing karst, cultural resource, recreation, special use, and minerals programs could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the majority of the roadless area, including the scenic, karst, old growth, and cultural values, would be provided long-term protection if designated wilderness.

Under Alternative 6, a 28,313-acre portion of the area would be converted to Recommended LUD II. This would convert all lands not currently designated LUD II to Recommended LUD II. Timber harvest would not be allowed. Ongoing karst, cultural resource, recreation, special use, and minerals programs would continue similar to current conditions with little restriction. The values associated with the natural settings of the roadless area, including the scenic, karst, old growth, and cultural values, would be provided long-term protection if designated LUD II.

Under Alternative 8, the entire roadless area would be converted to Recommended Wilderness LUD. Timber harvest would not be allowed. Ongoing karst, cultural resource, recreation, special use, and minerals programs could be restricted. Mineral prospecting would be allowed in the Recommended Wilderness LUD up to the time that the area is actually designated as wilderness by Congress. The values associated with the natural settings of the roadless area, including the scenic, karst, old growth, and cultural values, would be provided long-term protection if designated wilderness.

<b>Land Use Designation Allocations and Suitable Timber Lands by Alternative for Roadless Area 515 (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>		43,265			58,214		58,214	71,578
<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>								
<b>Enacted Municipal Watershed</b>								
<b>Old-growth Habitat</b>	8,025	8,025	8,025	8,025	4,224		4,224	
<b>Semi-remote Recreation</b>	3,191	3,191	3,191	3,191	3,145		3,145	
<b>Recommended LUD II</b>						28,313		
<b>LUD II</b>	43,265		43,265	43,265		43,265		
<b>Wild, Scenic, Recreational River</b>								
<b>Experimental Forest</b>								
<b>Scenic Viewshed</b>								
<b>Modified Landscape</b>	832	832	832	832	832		832	
<b>Timber production</b>	16,264	16,264	16,264	16,264	5,162		5,162	
<b>TOTAL</b>	<b>71,578</b>	<b>71,578</b>	<b>71,578</b>	<b>71,578</b>	<b>71,578</b>	<b>71,578</b>	<b>71,578</b>	<b>71,578</b>
<b>Suitable Timber Lands</b>	3,013	3,013	3,013	3,013	1,185	0	1,185	0