Addendum to Appendix F

Land Use and Coastal Management Technical Report

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DECEMBER 2005

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FIGURES

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1.0 AFFECTED ENVIRONMENT

Because Alternatives 2, 2A, and 2C are no longer reasonable alternatives, no discussions regarding impacts to the Dewey Lakes Recreation Area, the Skagway unit of the Klondike Gold Rush National Historic Park, and the Chilkoot Trail are provided in this addendum. The following subsections introduce supplemental and updated information identified since publication of the Supplemental Draft EIS for several still relevant aspects of the affected environment: old-growth forest habitat; inventoried roadless areas; the Goldbelt quarry, which received a City and Borough of Juneau (CBJ) Conditional Use Permit on November 30, 2004; the Channel Construction quarry on Goldbelt land, which received a CBJ Conditional Use Permit on May 10, 2005; the Kensington Gold Project; the City of Skagway ordinance creating the Dewey Lakes Recreation Area Management Plan; and the recently revised Alaska Coastal Management Program (ACMP).

1.1 Land Ownership and Management Status

1.1.1 United States Forest Service

Old-Growth Forest Habitat – Most of the land in the Juneau Access Improvements Project area is part of the Tongass National Forest, federally owned and managed by the United States Forest Service (USFS). (Federal land in the project area not managed by the USFS is managed by the National Park Service [NPS]). The 1997 Tongass Land and Resource Management Plan (TLMP) contains Land Use Designations (LUDs) to manage land parcels within the Tongass National Forest. There are two main LUD categories in the TLMP: Non-Development (which maintains old-growth forest habitat) and Development. Each LUD category describes the purpose and objectives of management for each area of the Tongass National Forest and establishes specific constraints for the various uses. Figure 1 depicts the locations of current TLMP land use designations within the project area.

The Non-Development LUD category contains two groups: Wilderness and National Monument, and Mostly Natural. The Development LUD category also consists of two groups: Moderate Development and Intensive Development. Each of these four groups consists of sub-categories of LUD designations, which are described in detail in the *Land Use and Coastal Management Technical Report*. Old-growth forest habitat has been described in the following discussion to clarify its purpose and importance within the Non-Development LUDs in the Tongass National Forest ecosystem. Lands on both sides of Lynn Canal, in the vicinity of the Juneau Access Improvements Project, contain a few contiguous areas of high volume old-growth forest habitat, as well as intermittent areas of high and low volume old-growth forest habitat (USFS, 1997a).

Old-growth forest habitat is managed under two methods by the USFS. The majority of old-growth forest habitat is being conserved within lands designated as one of the Non-Development LUDs that function as medium and/or large old-growth forest reserves. A smaller amount of old-growth forest habitat that meets specific criteria, size, spacing, and composition requirements (for specific requirements see the addendum to the *Wildlife Technical Report*, or Appendix K of the 1997 TLMP [USFS, 1997b]) will be preserved as small reserves, and are mapped on the TLMP Land and Resource Management Map as Old-Growth Habitat LUDs (see Figure 1). These two kinds of old-growth forest habitat reserves are intended to sustain healthy forest ecosystems and a mix of habitats to maintain variable and well distributed wildlife populations across the Tongass (USFS, 1997b).

According to Appendix K of the TLMP, evaluating any modification of mapped old-growth reserves must include consideration of Non-Development LUDs that maintain the integrity of the old-growth forest habitat ecosystem and contribute to a forest-wide system of old-growth forest habitat. Where the Non-Development LUDs do not fulfill size, spacing, and composition criteria of old-growth habitat reserves, it would be necessary to add or modify old-growth reserves to meet the criteria. The USFS Kensington Gold Project Record of Decision (ROD) expanded the small old-growth reserves in value comparison units (VCUs) 160, 190, and 200 (extending the boundary of the small old-growth reserve in VCU 200 into VCU 160). Figure 1 of this addendum reflects these changes.

Roadless as Resource – Inventoried roadless areas provide similar functions as designated wilderness areas and have been inventoried and evaluated for potential to be designated as wilderness in the future (under the Wilderness Act of 1964). Consequently, roadless areas are considered a resource and any potential effects to them need to be evaluated. Roadless areas are categorized as inventoried roadless or small unroaded areas (smaller areas identified but not included in the inventory) and are managed to protect their wildland character (Figure 2). The definitions of these two are (USFS, 2003):

- **Inventoried roadless area**: "Undeveloped areas typically exceeding 5,000 acres that met the minimum criteria for wilderness consideration under the Wilderness Act and that were inventoried during the Forest Service's Roadless Area Review and Evaluation (RARE II) process, subsequent assessments, or forest planning."

  Roadless areas exclude buffer zones by all existing roads and harvest units, as all areas within 1,200 feet of an existing road and 600 feet of an existing harvest unit are considered developed areas.

- **Unroaded area**: "Any area, without the presence of a classified road, of a size and configuration sufficient to protect the inherent characteristics associated with its roadless condition. Unroaded areas do not overlap with inventoried roadless areas." There are two categories of unroaded areas: (1) 1,000 to 5,000 acres in size, and (2) less than 1,000 acres.

After evaluating roadless areas for wilderness recommendations[1], the USFS determined that it would not be necessary to recommend additional designated wilderness on the Tongass National Forest because of several factors: (1) almost 40 percent of the Tongass is currently designated as wilderness, National Monument, or other Non-Development land use designations; (2) most of the remaining Tongass is managed to remain in a largely untouched, wildland state or to assure long-term sustainability; and (3) effects to communities' economies. Approximately 92 percent of the Tongass is either wilderness (35 percent) or inventoried roadless area (57 percent). The USFS goal is to indefinitely manage most of the Tongass as

[1] The 1979 TLMP recommended 10 areas for wilderness that, with minor changes, were made part of the National Wilderness Preservation System in 1980 by the Alaska National Interest Lands Conservation Act (ANILCA). In 1990 the Tongass Timber Reform Act (TTRA) designated 5 new wilderness areas on the forest and enlarged 1 wilderness and 12 legislated Land Use Designation II (LUD) areas to retain their roadless and wildland character. The TLMP was amended in February 1991 to incorporate the TTRA changes, with a TLMP Revision and ROD issued in 1997. After appeals, the Final EIS and ROD for the 1997 TLMP were issued in 1999. However, the Court determined that the 1997 TLMP should have considered making wilderness recommendations for the National Wilderness Preservation System. The USFS prepared a Supplemental EIS in 2003 to evaluate roadless areas for wilderness recommendations. Congressionally designated LUD II areas are included in the roadless assessment.

undeveloped, and manage most of the non-designated wilderness lands as wild and roadless (USFS, 2003). The inventoried roadless areas and unroaded areas in the Tongass National Forest are managed according to the current 1997 TLMP, as supplemented by the February 2003 Supplemental EIS, according to the management prescriptions for the corresponding LUD. The TLMP protects lands managed for a natural setting through a Non-Development LUD. Table 1 shows the percentage of Development and Non-Development LUDs for Roadless Areas 301, 303, and 304 (USFS, 2003).

Table 1
Development and Non–Development LUDs in Roadless Areas

Roadless Area	Development LUDs	Non-Development LUDs
301 – Juneau-Skagway Icefield	2%	98%
303 – Sullivan	22%	78%
304 – Chilkat-West Lynn Canal	23%	77%

Following are brief descriptions of these inventoried roadless areas (USFS, 2003) crossed by Alternatives 2B, 3, 4B, and 4D. Roadless Area 301 (Juneau–Skagway Icefield) is crossed by Alternatives 2B, 3, 4B, and 4D. Alternative 3 also crosses Roadless Areas 303 (Sullivan) and 304 (Chilkat).

Roadless Area 301 – **Juneau-Skagway Icefield** – This roadless area extends from the Juneau vicinity to Skagway on the east side of Lynn Canal, with the south boundary at the shoreline abutting Area 305 near Cascade Point. Access to Area 301 is by boat and aircraft, and hiking trails off the Juneau road system.

Area 301 encompasses 1,201,474 acres with 159 miles of shoreline bordering Lynn Canal. There are approximately 129,669 acres mapped as forestland, of which 60,528 acres (47 percent) are productive old-growth forest.

Area 301 is generally unmodified and natural. It provides a very high opportunity for solitude and primitive recreation as well as sport and commercial fishing. The primary Recreation Opportunity Spectrum (ROS) class is Primitive, covering 90 percent of Area 301. The Wilderness Attribute Rating System of Area 301 is 25 out of 28 possible points for wilderness characteristics (natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities).

Area 301 is managed under nine LUDs: Modified Landscape, Minerals, Transportation and Utility System (TUS), Remote Recreation, Semi-Remote Recreation, LUD II, Wild River, Research Natural Area, and Old-Growth Habitat. The Minerals LUD is secondary, overlaying the other land uses. The TUS LUD is also secondary, with land in this LUD managed for the other land uses it overlays until a transportation or utility is constructed in the LUD. The Development LUD, Modified Landscape, covers 2 percent of the roadless area, with the remaining 98 percent managed as Non-Development LUDs. Current uses of the area are hydroelectric power plants, scientific research, dispersed recreation, wilderness viewing opportunities, use of the icefield, the Berners Bay cabin and Berners Bay, and minor fishing use (USFS, 2003). Roadless Area 301 is not typically used for subsistence (Alaska Department of Fish and Game [ADF&G], 1998).

Roadless Area 303 – **Sullivan** – This roadless area encompasses federal land from the Endicott River Wilderness boundary to the north boundary of the Tongass National Forest on

the Chilkat Peninsula mainland. Area 303 is accessed by water or plane. There is a usable airstrip adjacent to the area on an alluvial fan along Lynn Canal. The shoreline is flat and accessible at two river mouths from Lynn Canal.

Area 303 covers 66,143 acres including 30 miles of shoreline on the west side of Lynn Canal. It also contains three small unroaded areas less than 1,000 acres in the Sullivan River delta area at the shoreline. There are 17,135 acres of forestland in Area 303, of which 75 percent is productive old-growth forest. The productive old-growth forest includes 5,693 acres of high volume, coarse canopy old-growth.

Area 303 is managed under five LUDs: Modified Landscape, Scenic Viewshed, Minerals, TUS, and Semi-Remote Recreation. The Minerals and TUS LUDs are secondary, overlaying the other land uses. The Development LUDs, Modified Landscape and Scenic Viewshed, cover 22 percent of Area 303. The remaining 78 percent is designated as a Non-Development LUD, Semi-Remote Recreation.

Area 303's overall natural integrity is high and its appearance is primarily natural. There is a very high opportunity for solitude and an outstanding opportunity for primitive recreation. Recreation use is low due to poor accessibility. Timber harvest previously occurred in four areas along the shoreline. Mining began in more recent history, and currently, there are active mineral claims. Other than mining, documented historic use has been minimal. Hunting is a primary interest here, although subsistence use is limited.

The primary ROS classes in Area 303 are Primitive and Semi-Primitive Non-Motorized, which cover 54 and 38 percent, respectively, of the roadless area. Along the shoreline of Lynn Canal there is an increased probability of seeing or hearing human activity, including small planes, ferries, small boats, or cruise ships. The Wilderness Attribute Rating System of Area 303 is 26 out of 28 possible points for its natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities.

Roadless Area 304 – Chilkat-West Lynn Canal – Roadless Area 304 encompasses federal land from the south end of the Chilkat Peninsula north to Endicott River, and is bordered on the east by Lynn Canal. Areas 303 and 304 are separated by a previously harvested timber unit and development area. Access to Area 304 is possible via boat and floatplane. There are no places suitable for landing wheeled airplanes, and access into the interior is by foot or helicopter.

Area 304 covers 198,109 acres; 82,300 acres is forested land. Fifty-eight percent of the forested land is productive old-growth forest. This old-growth forest includes 23,789 acres of high volume, coarse canopy old-growth forest.

The area is managed under five LUDs: Scenic Viewshed, Timber Production, TUS, Semi-Remote Recreation, and Old-Growth Habitat. The TUS LUD is secondary, overlaying the other land uses. The development LUDs, Timber Production and Scenic Viewshed, cover 23 percent of Area 304. The remaining 77 percent is designated as Non-Development LUDs (Semi-Remote Recreation and Old-Growth Habitat).

Roadless Area 304 is largely unmodified and maintains its natural integrity and apparent naturalness. There is a very high opportunity for solitude and an outstanding opportunity for primitive recreation. The primary ROS classes for Area 304 are Primitive and Semi-Primitive Non-Motorized, which cover 48 and 44 percent, respectively, of the roadless area. Along the

shoreline of Lynn Canal there is an increased potential for seeing or hearing human activity, including small planes, ferries, small boats, or cruise ships. The Wilderness Attribute Rating System for Area 304 is 25 out of 28 possible points for its natural integrity, apparent naturalness, outstanding opportunity for solitude, and primitive recreation opportunities.

Current recreation uses are mostly dispersed. There are no public recreation facilities. There is documented subsistence use. There have been three previous USFS timber sales adjacent to the roadless area. The roadless area has been suitable for human occupation, with documented prehistoric sites recorded. Recent uses have been mining and black bear and mountain goat hunting. This roadless area has high scenic quality with a mostly natural appearing landscape. Developed areas are visible from only some locations. Existing modifications include small mining claims and timber harvest activities. Three areas previously harvested are found at the alluvial fans formed by glacial rivers.

1.1.2 Private Land

East Lynn Canal

Goldbelt Incorporated – Goldbelt, a Native Corporation based in Juneau, owns 3,200 acres near Juneau, and 1,382 of these acres are in the Juneau Access Improvements study area surrounding Echo Cove. Goldbelt is a for-profit Native Corporation with approximately 3,200 shareholders established under the Alaska Native Claims Settlement Act (ANCSA). After two decades of business activity primarily in timber harvest, the Vision 2000 management plan was created for the corporation to plan an exit from the timber industry and enter Southeast Alaska's tourism industry, now operating 12 tourism-based subsidiaries (Goldbelt, 2005).

In 1996, Goldbelt prepared the Echo Cove Master Plan and in 1998, the USFS issued a Record of Decision (ROD) for a proposed access highway from Echo Cove to Cascade Point in Berners Bay. The Goldbelt Corporation was granted a CBJ Conditional Use Permit in November 2004, to reopen and expand an existing rock quarry to supply shot rock for construction of a 2.5-mile extension of Glacier Highway from its terminus to Cascade Point. The road will provide access to a commercial dock at Cascade Point, which was approved by the Juneau Planning Commission in 2004 to support Kensington Mine. Both the road and dock were submitted as part of Goldbelt's Master Plan for Echo Cove in 1996. The quarry project site will include a 10-acre project area, of which 3 acres will be the quarry site, a 1.5-acre expansion of the current 1.5-acre quarry (CBJ, 2004).

In May 2005, a rock quarry on Goldbelt land was approved by the CBJ through a Conditional Use Permit issued to Channel Construction. This quarry site is near the Goldbelt quarry at Echo Cove. Use of material from this quarry is not tied to any specific project.

Kensington Gold Project – At present, no mining is occurring along the east side of Lynn Canal in the project area. Coeur Alaska, Inc., a mining company based in Idaho, acquired the Kensington and Jualin mines in the 1990s and received all permits required to begin construction and operations following publication of the *1997 Kensington Gold Project Final Supplemental Environmental Impact Statement* and issuance of a USFS ROD. In December 2004 the USFS finalized the Final SEIS and issued the ROD for the modified Kensington Gold Project (Alaska Department of Natural Resources [ADNR], 2005a). In June 2005, Coeur Alaska, Inc. received the National Pollutant Discharge Elimination System Permit; later it received the 404 Wetlands Permit from the U.S. Army Corps of Engineers (USACE) to authorize construction of a tailings facility, millsite road improvements, and a Slate Creek Cove dock facility. In an effort

to increase efficiency and reduce disturbance in the area, Coeur Alaska, Inc. submitted an amended Plan of Operations, which was approved in the USFS 2004 ROD. The project is expected to begin production in 2007 (Coeur Alaska, Inc., 2005).

1.2 Land and Resource Uses

Timber Harvests – In 1997, 1999, and 2000, Goldbelt conducted a timber harvest in the Cascade Point/Echo Cove area. The 40-acre site that was clear cut in 1999-2000 is now being developed as a quarry. In 2005, the right-of-way for the Cascade Point access highway was logged. There are no plans on national or state forest lands for timber harvests in the project area. Management plans for these lands are unlikely to change in the reasonable foreseeable. There are no current plans to harvest timber on private or trust lands; however, construction of a highway on the west side of Lynn Canal could lead to some timber harvest on Mental Health and University Trust lands. It is not possible to quantitatively predict a reasonably foreseeable amount of timber harvest. Therefore, the potential effects of logging on these lands were evaluated qualitatively. The only logging included as reasonably foreseeable in a quantitative evaluation of cumulative impacts is the logging within the right-of-way for construction of one of the alternatives for the Juneau Access Improvements Project, the logging associated with the Kensington Mine Project, and land clearing associated with Goldbelt development at Cascade Point.

Mineral Development – The Goldbelt Corporation was granted a Conditional Use Permit in November 2004, to reopen an existing rock quarry to supply shot rock for construction of a 2.5-mile extension of Glacier Highway from its terminus to Cascade Point. Also, in May 2005, Channel Construction was granted a CBJ Conditional Use Permit to develop a new quarry on previously logged Goldbelt land.

1.3 Residential, Commercial, Industrial and Public Land Use

New commercial and industrial developments within the Juneau Access Improvements Project area include two quarries on Goldbelt's land and construction of a 2.5-mile extension of Glacier Highway. The quarries and road extension are within the CBJ boundary.

1.4 Parks and Recreation Facilities

The Lower Dewey Lake area is a popular hiking and picnicking destination and trail hub owned by the City of Skagway. The area has many trails connecting to Sturgill's Landing, Icy Lake, Upper Reid Falls, Upper Dewey Lake, and Devil's Punchbowl. On October 7, 2004, the City of Skagway adopted an ordinance creating the Dewey Lakes Recreation Area Management Plan. This ordinance sets forth allowable and prohibited activities for this management area.

1.5 Coastal Zone Management

On January 21, 2003, revisions to the ACMP Coastal Consistency Review process (6 Alaska Administrative Code [AAC] 50) went into effect to clarify the regulations and modify the process used to evaluate a proposed project with regard to statewide and district coastal management plan enforceable policies. On April 15, 2003, the responsibilities for the ACMP were transferred from the Office of the Governor, Division of Governmental Coordination, to the Office of Project Management and Permitting (OPMP) within the ADNR. In 2004, the ACMP implementing regulations (6 AAC) were renumbered and adopted in Title 11 as 11 AAC 110, 112, and 114.

The National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management (OCRM) is currently in the process of reviewing an amendment to the ACMP to determine if the management program, as changed by the amendment request, will meet federal requirements. The State's ACMP amendment consists of changes to 11 AAC Chapters 110, 112, and 114. In September 2005, OCRM issued a Draft EIS to review the State's amendments to the ACMP, and comments were received in November 2005. OCRM expects to issue a ROD and Program Amendment Approval by the end of December 2005.

Three local coastal districts lie within the Juneau Access Improvements Project area: the City of Skagway, Haines Borough, and CBJ. These districts are required to submit amendments to their coastal management plans for approval by ADNR by March 1, 2006; after approval by ADNR and OCRM, plans would go into effect and would be incorporated into the ACMP. If any coastal district plan is not approved by March 1, 2007, the district's original plan would sunset at that time, according to 11 AAC 114. The Skagway and Haines coastal districts submitted revised coastal management plans to ADNR in 2005. As of December 2005 the CBJ had not submitted any revision.

The ACMP statewide standards are the criteria used during a State of Alaska coastal consistency review of activities within and affecting coastal zone uses and resources. Enforceable policies developed by local districts provide supplemental criteria that are specifically applicable to the local district.

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2.0 IMPACTS

Methods

Roadless Areas as a Resource – Roadless areas are discussed in terms of wilderness because they are a resource for future wilderness designation, although they do not have a permanent protection status like a wilderness designation. The USFS uses three criteria for a wilderness evaluation: capability, availability, and need. For this assessment, potential impacts of project alternatives on roadless areas were evaluated on the basis of their effects to the elements of the capability criterion. The other two criteria, availability and need, pertain to USFS management issues and responsibilities that neither the Federal Highway Administration (FHWA) nor the Department of Transportation and Public Facilities (DOT&PF) can direct. Therefore, they were not used in the impact analysis. Elements or values of the capability criterion used in the impact assessment were natural integrity and appearance (apparent naturalness); opportunities for solitude and serenity, self-reliance, adventure, challenging experiences, and primitive recreation; wilderness attribute rating system; and scientific and education values.

Old-Growth Reserves – The assessment of the potential impacts of project alternatives on old-growth reserves was based on the long-term loss of old-growth forest habitat resulting from the construction of project facilities.

2.1 Alternative 2B

2.1.1 Consistency with Land Use and Management Plans

2.1.1.1 Roadless Areas as a Resource

Alternative 2B would construct a 50.5-mile highway from the end of Glacier Highway at Echo Cove around Berners Bay to Katzehin. Approximately 48.0 miles of the highway (the first 2.5 miles of highway at Echo Cove is not in Area 301) would go through Roadless Area 301.

The highway would have a cleared width of approximately 100 feet. The corridor of "road effect" would consist of the width of the highway clearing, and 1,200 feet on either side of the new highway. This would result in a 2,500-foot-wide road-effect corridor where sufficient land exists. For the most part, Alternative 2B would be near the shoreline, resulting in a narrower corridor due to the small amount of land on the shoreward side in some places. In Alternative 2B, the highway would be the farthest from the shoreline near the Antler River in Berners Bay, at the Point Saint Mary ridge, and at the Katzehin River Delta. In Roadless Area 301, from Cascade Point to the Katzehin River, Alternative 2B would create a road-effect corridor 1,300 to 2,500 feet wide, affecting 3,120 acres on the shoreward side (west side) of the alignment and affecting 7,255 acres on the upland side (east side) of the alignment. The total area of road effect for Alternative 2B within Area 301 would be about 10,375 of 1,201,474 acres. Alternative 2B would reduce the size of Roadless Area 301 by 0.9 percent.

Roadless Area Capability – Natural Integrity and Appearance (Apparent Naturalness) and Opportunities for Solitude – Alternative 2B would not change the natural integrity and appearance or opportunities for solitude in Area 301. While the roadless area would be decreased by this alternative, the decrease would be a very small percentage. Area 301 is a very large undeveloped area of mostly unmodified and naturally appearing land containing 1,201,474 acres. Most of Area 301 (98 percent) is managed as Non-Development LUDs. The

boundary of the roadless area would be adjusted to exclude the road-effect corridor. The remaining acreage of the modified roadless area would continue to be eligible for wilderness designation under the National Wilderness Preservation System, because it would contain at least 5,000 acres with no roads and retain a roadless character.

Roadless Area Management Consistency – Alternative 2B is consistent with the management direction in Appendix C of the USFS 2003 TLMP Supplemental EIS, Section III(8), "Availability for Management as Wilderness." The TLMP Appendix C states that the highway would be within Roadless Area 301, and "the Forest Plan retains a proposed state road corridor … along this area."

2.1.1.2 Old-Growth Reserves

Alternative 2B would impact three mapped small Old-Growth Habitat LUDs that are reserves established under the old-growth reserve system: VCU 160 in the Slate Cove Area; VCU 200 at the south end of Point Saint Mary Peninsula, adjacent to VCU 160; and VCU 190 from north of Comet to approximately Met Point. Alternative 2B would reduce the VCU 160 mapped small old-growth reserve by 2 percent, VCU 200 mapped small old-growth reserve by 0.5 percent, and VCU 190 mapped small old-growth reserve by 1.4 percent.

In addition to the mapped old-growth reserves, Alternative 2B would go through old-growth forested areas within lands designated as Non-Development LUDs that function as medium and/or large old-growth reserves. Alternative 2B would reduce the size of the old-growth forest habitat in all VCUs, as well as create a separation of some old-growth forest habitat areas into downslope and upslope areas. Alternative 2B would remove approximately 286 of 76,279 acres of old-growth forest habitat along the east side of Lynn Canal (USFS, 2003 for total old-growth forest acres).

The USFS, in consultation with the Alaska Department of Fish and Game (ADF&G) and the U.S. Fish and Wildlife Service (USFWS), would adjust the boundaries of the Old-Growth Habitat LUDs affected by Alternative 2B in accordance with old-growth reserve standards in the TLMP.

2.1.2 Land and Resource Uses

The USFS has concurred with FHWA that the Berners Bay cabin is a specific recreational site on USFS land within the project study area, though Alternative 2B would not take land from this recreation site (Griffin, 2004). Therefore, FHWA has determined that Alternative 2B would not require use of land protected by Section 4(f). On August 27, 2004, the USFS concurred that the cabin area is significant and a trail and parking area are desirable; road access to the cabin would be advantageous to many users, but the loss of a water-access experience within the Juneau Ranger District would be undesirable. DOT&PF and FHWA agreed to provide a trail to the existing cabin as an enhancement of an existing Section 4(f) resource, and to provide a new water-accessed cabin as a general mitigation for impacts to Berners Bay users desiring a remote, water-access experience (DOT&PF, 2005). Improved access to the Berners Bay cabin would be desirable to many recreationists. Building the second cabin to assure water-access values are sustained, would maintain more remote recreation values.

Opening up recreation opportunities of the coastline along the east side of Lynn Canal would be perceived as a negative impact to the quality of the experience by those who enjoy the existing remote nature of the region, including some outfitters who currently provide wilderness trips

there. Current users of Berners Bay who travel there by kayak, canoe, small boat, or float plane would find the experience there different. DOT&PF would construct a new remote-access cabin for the USFS at a location selected by the USFS.

2.1.2.1 Roadless Areas as a Resource

Land that would be affected by Alternative 2B is located mostly along the waterfront area of Lynn Canal. The corridor would be at the shoreward edge of Roadless Area 301 and would not intrude far into its inner part, leaving the larger portion of the roadless area unaffected and available for apparent naturalness and opportunities for solitude. Also, the highway would be in an area already affected by frequent water and air traffic and other activities.

With the exception of access via the major rivers, recreationists would access the roadless area by highway, rather than by water. Under Alternative 2B, recreationists would be exposed to development and human activity at the point of access from the highway.

Roadless Area 301 is split into four classes in the USFS Recreation Opportunity Spectrum (ROS) system. One of the classes, Semi-Primitive Motorized ROS setting, is a narrow strip adjacent to the shore of Lynn Canal. Upland of the narrow strip is a Semi-Primitive Non-Motorized ROS, and the remaining land in Area 301, upland of the Semi-Primitive Non-Motorized ROS, is a large area classified as Primitive Recreation ROS. Based on these configurations, the primary ROS for Area 301 is Primitive (90 percent of the roadless area). Alternative 2B would be in the Semi-Primitive Motorized, Semi-Primitive Non-Motorized, and Roaded Natural ROS classes.

TLMP provisions allow the UFSF to change recreation settings in locations where approved activities would affect the ROS settings. The ROS settings where the Alternative 2B highway corridor would occur would be changed to Roaded Natural.

Capability – Scientific and Education Values – Alternative 2B would not affect any identified scientific and education areas in Area 301 (identified features are glaciers and icefields, and a Research Natural Area at Warm Pass).

2.1.3 Coastal Zone Management

Alternative 2B would be within the coastal zone, primarily on USFS managed land. Federal lands owned, leased, or held in trust or whose use is otherwise subject by law solely to the discretion of the federal government, are excluded from the coastal zone boundary of the Alaska ACMP and local plans. Uses and activities on excluded federal lands that affect the coastal zone must be consistent with the ACMP (ADNR, 2005b).

The ACMP statewide standards are the criteria used during a State of Alaska coastal consistency review of activities within and affecting coastal zone uses and resources. Enforceable policies, developed by local districts, provide supplemental criteria that are specifically applicable to the local district. The topics addressed by the enforceable policies of the ACMP and the district coastal management plans that are relevant to Alternative 2B are coastal development; geophysical hazards; recreation; transportation and utilities; timber harvest; mining and mineral processing; subsistence; biological habitats; air, land, and water quality; and prehistoric and historic resources.

Alternative 2B has been sited in consideration of the enforceable policies of the ACMP and district coastal management plans. These enforceable policies would also be considered in the development of design parameters for the alternative selected for the proposed project. In accordance with the CZMP, DOT&PF will obtain a determination from ADNR of the consistency of the selected alternative with the state coastal management program and Juneau coastal management plan following the USACE and ADNR public notice period as part of the process to obtain the necessary state and federal permits for the project.

The following is a brief description of how Alternative 2B would be consistent with the major statewide standards and district coastal management enforceable policies. This discussion is based on existing statewide standards and coastal district policies. ADNR is currently in the process of obtaining federal approval of revised ACMP statewide standards and is currently working with coastal districts to revise coastal district enforceable policies. The enforceable policies under 6 AAC 80 are currently used until ADNR receives approval on the amendment to the ACMP from the National Oceanic and Atmospheric Administration, OCRM.

2.1.3.1 Statewide ACMP Standards

Geophysical Hazard Areas (6 AAC 80.050) – DOT&PF has identified and mitigated known geophysical hazards through preliminary design measures.

Recreation (6 AAC 80.060) – DOT&PF would maintain public access to coastal waters. There are no recreation areas designated by coastal districts in the project area.

Habitats (6 AAC 80.130) – DOT&PF has coordinated with state and federal agencies to identify coastal habitats that may be impacted by Alternative 2B. DOT&PF has adjusted the highway alignment to avoid all palustrine emergent wetlands and to avoid other wetlands and sensitive habitats to the greatest extent possible.

Air, Land, and Water Quality (6 AAC 80.140) – During construction, operation, and maintenance of Alternative 2B, DOT&PF would ensure compliance with all Alaska Department of Environmental Conservation (ADEC) regulations regarding water, air, and land quality. Best Management Practices (BMPs) would be used to avoid downstream water degradation below water quality standards.

Historic, Prehistoric, and Archaeological Resources (6 AAC 80.150) – No historic, prehistoric, and archaeological areas of significance are identified in the CBJ coastal management plan. DOT&PF has worked closely with the State Historic Preservation Officer to complete all necessary cultural resource surveys to identify any areas important to state or local history or prehistory. DOT&PF would implement mitigation measures to protect the Jualin Mine Tram and Comet/Bear/Kensington Railroad.

2.1.3.2 City and Borough of Juneau Coastal Management Program Enforceable Policies

Coastal Development (49.70.905) – DOT&PF would comply with the Coastal Development policies through use of BMPs for design and construction to avoid or minimize hazards. Dredging and filling necessary for construction of the highway would be avoided to the greatest extent possible in highly productive tidelands or wetlands, subtidal lands important for shellfish, and habitat important to resident or anadromous fish. Transportation facilities are exempt from meeting the policy prohibiting intertidal fill below mean high tide.

Geophysical Hazards (49.70.910) – Alternative 2B would comply with these policies by reducing erosion possibilities and visible scarring to the landscape through mitigation and BMPs during design and construction. Hazards such as avalanche and rockslide chutes have been identified, and design and avalanche control measures would be implemented to ensure the safety of the public and property. Areas impacted during construction would be revegetated with native species where necessary. All large floodplains along the highway corridor would be crossed with bridges. Multiple-span bridges would be supported on pilings that would be of size and distribution as to create no significant flood risks. Smaller flood plains of streams that do not support anadromous fish would be crossed with culverts. Where construction within the floodplain is necessary, facilities would be constructed to meet 100-year flood requirements.

Transportation and Utilities (49.70.925) – DOT&PF, to the extent feasible, has located the highway alignment to avoid wetlands, intertidal marshes, and aesthetic degradation. DOT&PF has moved the alignment for Alternative 2B (Preferred Alternative) to avoid all palustrine emergent wetlands and reduce impacts to estuarine wetlands. All anadromous stream crossings would be designed to avoid impacts to fish passage and habitat disturbance including the avoidance of in-stream work during spawning or times of critical period for anadromous fish. Where possible, the highway alignment has been adjusted to avoid sensitive coastal areas.

Fish and Seafood Propagation and Processing (49.70.930) – All anadromous stream crossings and EFH crossed by Alternative 2B would be designed and constructed as to have no impact to spawning or migration of these fish species or impacts that may degrade water quality (See Air, Land, and Water Quality 49.70.955).

Timber Harvest and Processing (49.70.935) – Land clearing and timber harvest conducted as part of the construction of Alternative 2B would be done to minimize any environmental impacts, and avoid impacts to movement of fish in coastal waters. No log processing facilities, in-water log dumping and storage, or additional roads are proposed as part of the clearing and timber harvesting.

Habitat (49.70.950) – Impacts to coastal habitat areas are identified and mitigated to maintain habitat values of esturaries, wetlands, tide flats, rivers and streams. The alignment was designed to avoid these areas to the greatest extent possible, avoiding all palustrine and estuarine emergent wetlands in the CBJ. The highway would be constructed with a minimum-width fill footprint in wetlands. Impacts to vegetated and mud tideflats have been avoided; impacts to rocky tide flats would be minimized by using steepened side slopes and sidecasting only in steep areas where the material would settle in subtidal depths. Impacts to streams and rivers would be minimized by bridging over all anadromous fish streams, timing in-water work to avoid fish, and clear spanning the eulachon spawning area in the Antler River. Based on these measures, and the extent of the remaining areas of estuary, wetland, and tide flat habitat in the project area, these habitats would continue to sustain necessary biological, physical, and chemical characteristics.

Air, Land, and Water Quality (49.70.955) – During construction, operation, and maintenance of Alternative 2B, DOT&PF would ensure all ADEC regulations are met. BMPs would be used to avoid downstream water degradation below water quality standards.

2.1.4 Subsistence

Alternative 2B would not impact subsistence hunting on Sullivan, Lincoln, Shelter, Chichagof, or Admiralty islands, the lands adjacent to Taiya Inlet, and the south shore of James Bay. It would

not impact subsistence fishing in Taiya Inlet or subsistence hunting of marine mammals anywhere in Lynn Canal.

Haines and Skagway residents use the Katzehin River area for subsistence harvest of marine invertebrates and marine mammals. Alternative 2B, combined with USFS plans for potential public access locations along the highway, would increase access to areas for subsistence harvest activities that previously were accessible only by boat or aircraft. This access could increase competition for subsistence resources from recreational hunting and fishing. These changes to subsistence opportunities would be viewed as beneficial for some subsistence harvesters, but for others the increased competition for resources would be negative.

Juneau is not recognized as a subsistence community under the Alaska National Interest Lands Conservation Act (ANILCA). However, some residents of Juneau use Berners Bay and Lynn Canal for personal use harvests of fish and shellfish.

Based on the 1998 USFS subsistence study, the 1994 ADF&G analysis of subsistence impacts, 2003 scoping comments for the Supplemental Draft EIS, Supplemental Draft EIS hearing and written comments, and an analysis of these sources of information, FHWA has determined that Alternative 2B would not significantly restrict subsistence uses.

2.2 Alternative 3

2.2.1 Consistency with Land Use and Management Plans

2.2.1.1 Roadless Areas as a Resource

Alternative 3 would construct a 5.2-mile road from Echo Cove to Sawmill Cove on the east side of Lynn Canal, and a 38.9-mile highway between William Henry Bay and Haines on the west side of Lynn Canal. Approximately 2.5 miles of highway would go through Roadless Area 301 (to Sawmill Cove), 6 miles in Roadless Area 304 (William Henry Bay to Endicott River), and approximately 15 miles in Roadless Area 303.

As discussed in Alternative 2B the road-effect corridor would be 2,500 feet wide, where sufficient land exists. For the most part, Alternative 3 would be near the shoreline, resulting in a narrower corridor due to the small amount of land on the shoreward side. The Alternative 3 highway alignment would be farthest from the shoreline at the deltas of the Endicott and Sullivan rivers, and at a delta opposite the north end of Sullivan Island. Alternative 3 would have the following effects on roadless areas:

- In Roadless Area 301, over 2.1 miles from Cascade Point to Sawmill Cove, Alternative 3 would create a road-effect corridor 1,300 to 2,500 feet wide, affecting 293 acres on the shoreward side (west side) of the highway alignment and affecting 349 acres on the east side of the alignment. The total area of road effect for Alternative 3 within Roadless Area 301 would be about 642 of 1,201,474 acres. Alternative 3 would reduce the size of Roadless Area 301 by 0.05 percent.
- In Roadless Area 304, from William Henry Bay to the Endicott River, Alternative 3 would create a road-effect corridor 1,300 to 2,500 feet wide, affecting 156 acres on the shoreward side (east side) of the alignment and affecting 818 acres on the upland side (west side) of the alignment. The total road effect for Alternative 3 within Roadless Area 304 would be about 975 of 198,109 acres, reducing this roadless area by 0.5 percent.

- In Roadless Area 303, from the Endicott River to the north boundary of the Tongass, Alternative 3 would create a road-effect corridor 1,300 to 2,500 feet wide, affecting 1,087 acres on the shoreward side (east side) of the alignment and affecting 2,592 acres on the upland side (west side) of the alignment. The total area of road effect for Alternative 3 within Roadless Area 303 would be about 3,678 of 66,143 acres, reducing this roadless area by 5.6 percent.

Roadless Area Capability – Natural Integrity and Appearance (Apparent Naturalness) and Opportunities for Solitude – Alternative 3 would not change the natural integrity and appearance or opportunities for solitude in the majority of Roadless Areas 301, 303 and 304. While Alternative 3 would reduce Areas 301, 303, and 304 in size, the reduction would be a very small percentage of each area. Roadless Area 301 is a very large undeveloped area of mostly unmodified and natural appearing land, containing 1,201,474 acres. Most of Area 301 (98 percent) is managed as Non-Development LUDs. Area 303 consists of 66,143 acres of primarily natural land. Area 303 contains 66,143 acres. Most of Area 303 (78 percent) is managed as Non-Development LUDs. Area 304 contains 198,109 acres, most of which (77 percent) are managed as Non-Development LUDs. Area 304 is largely unmodified and has an overall appearance of naturalness.

The boundaries of the roadless areas would be adjusted to exclude the road effect corridor. The remaining acreage of Areas 301, 303, and 304 would continue to be eligible for wilderness designation under the National Wilderness Preservation System, because they would contain at least 5,000 acres with no roads and retain a roadless character.

Roadless Area Management Consistency – Alternative 3 is consistent with management direction for Roadless Areas 301, 303, and 304 in Appendix C of the USFS 2003 TLMP Supplemental EIS, Section III(8), "Availability for Management as Wilderness." The TLMP Appendix C states that the highway would be within Areas 301, 303 and 304, and "The Forest Plan retains a proposed state road corridor along this area."

In Roadless Area 303, Alternative 3 would bypass three small unroaded areas, each less than 1,000 acres that were identified in the USFS 2003 TLMP Supplemental EIS at the Sullivan River delta at the shoreline of the eastern side of the delta. Alternative 3 would have no effect on them.

2.2.1.2 Old-Growth Reserves

Alternative 3 would not impact any mapped old-growth reserves. Alternative 3 would go through old-growth forested areas within lands designated as Non-Development LUDs that function as medium and/or large old-growth forest habitat reserves. Alternative 3 would reduce the size of the old-growth forest stands in all VCUs, as well as create a separation of some old-growth forest areas into downslope and upslope areas. Alternative 3 would remove approximately 314 of 74,470 acres of old-growth forest habitat along the east and west sides of Lynn Canal (USFS, 2003).

The USFS, in consultation with ADF&G and USFWS, would adjust the boundaries of the Old-Growth Forest Habitat LUDs affected in accordance with old-growth reserve standards in the TLMP.

2.2.2 Land and Resource Uses

Alternative 3 and pullouts would improve opportunities for recreational activities such as hiking, camping, sightseeing, boating, bicycling, fishing, and hunting. These opportunities would provide benefits for residents and visitors, and spread out recreation activities that are currently concentrated along the existing highway systems in Juneau, Haines, and Skagway. Improved access to fish streams and the resultant higher level of use by sport fishers would require a greater level of effort by ADF&G in terms of surveying streams and enforcing regulations. Increased access to Juneau and the resultant increase in visitors would put additional pressure on existing sport fishing facilities, particularly boat ramps. The CBJ would be responsible for evaluating the need for additional or expanded facilities as demand increases.

Opening up these recreational opportunities on the coastline along the east side of Lynn Canal to Sawmill Cove and the west side of Lynn Canal from William Henry Bay to Haines would have a negative effect on the quality of the experience to those who enjoy the existing remote nature of the region, including some outfitters who currently provide wilderness trips in these areas.

2.2.2.1 Roadless Areas as a Resource

The land affected by Alternative 3 is located mostly along the waterfront area of Lynn Canal. For the most part, the corridor would not intrude into the inner parts of Areas 301, 303, and 304, leaving the larger portion of the roadless areas unaffected and available for apparent naturalness and opportunities for solitude. Also, the highway would be in an area already affected by frequent water and air traffic and other activities.

Under Alternative 3, users of the roadless areas would have highway access, rather than the current water access. At the point of access from the highway, recreationists would be exposed to development and human activity.

Alternative 3 would impact natural integrity and apparent naturalness and opportunity for solitude in a limited area in the Cascade Point to Sawmill Cove vicinity. There is currently a significant amount of recreation use in Berners Bay, and there are activities on adjacent land near Berners Bay; the Alternative 3 effects to solitude would be less in Berners Bay than other areas along the corridor, because Berners Bay is relatively heavily used.

Roadless Areas 301, 303, and 304, within the area affected by Alternative 3, are split into three classes in the USFS ROS system. The areas have the same basic configuration on both sides of Lynn Canal. Alternative 3 would be within a narrow strip of the current Semi-Primitive Motorized ROS setting, adjacent to the shore on both the east and west sides of Lynn Canal. Upland of the narrow shoreline strip of Semi-Primitive Motorized ROS on both sides of Lynn Canal are Semi-Primitive Non-Motorized ROS and, further upland, Primitive ROS. Based on these configurations, the primary ROS for Area 301 is Primitive (90 percent of the roadless area); the primary ROSs for Area 303 are Primitive (54 percent) and Semi-Primitive Non-Motorized (38 percent); and, the primary ROS for Area 304 is Primitive (48 percent) and Semi-Primitive Non-Motorized (44 percent).

TLMP provisions allow the USFS to change recreation settings in locations where approved activities would affect the ROS settings. The ROS settings where Alternative 3 would occur would be changed to Roaded Natural.

Capability – Scientific and Education Values – Alternative 3 would not affect any identified scientific and education areas for Roadless Areas 301, 303 or 304. In Area 301, the following features were identified: glaciers and icefields, and a Research Natural Area at Warm Pass. There are no identified special features in Areas 303 and 304.

2.2.3 Coastal Zone Management

The proposed West Lynn Canal Highway and ferry terminals are located in the coastal zone. The highway from Echo Cove to Sawmill Cove and the proposed Sawmill Cove Ferry Terminal are within the CBJ coastal management area. The West Lynn Canal Highway connection to Mud Bay Road would be in the Haines Borough coastal management area. Therefore, Alternative 3 would need to comply with the enforceable policies of the ACMP and segments of the alternative would need to comply with the CBJ and Haines coastal management plans.

The topics addressed by the enforceable policies of the ACMP and the coastal management plans that are relevant to Alternative 3 are coastal development; geophysical hazards; recreation; transportation and utilities; timber harvest; mining and mineral processing; subsistence; biological habitats; air, land, and water quality; and prehistoric and historic resources. These policies provide goals and performance criteria for activities within the coastal zone, including transportation projects.

Alternative 3 has been sited in consideration of the enforceable policies of the ACMP and district coastal management plans. These enforceable policies would also be considered in the development of design parameters for the alternative selected for the proposed project. In accordance with the CZMP, DOT&PF will obtain a determination from ADNR of consistency of the selected alternative with the state coastal management program and Juneau and Haines coastal management plans prior to obtaining the necessary state and federal permits for the project.

The following is a brief description of how Alternative 3 would be consistent with the major statewide standards and district coastal management enforceable policies. This discussion is based on existing statewide standards and coastal district policies. ADNR is in the process of obtaining federal approval of revised ACMP statewide standards and is currently working with coastal districts to revise coastal district enforceable policies. The enforceable policies under 6 AAC 80 are currently used until ADNR receives approval on the amendment to the ACMP from the National Oceanic and Atmospheric Administration, OCRM.

2.2.3.1 Statewide ACMP Standards

Geophysical Hazard Areas (6 AAC 80.050) – DOT&PF has identified and mitigated known geophysical hazards through preliminary design measures.

Recreation (6 AAC 80.060) – DOT&PF would maintain public access to coastal waters. There are no recreation areas designated by coastal districts in the project area.

Habitats (6 AAC 80.130) – DOT&PF has coordinated with state and federal agencies to identify coastal habitats that may be impacted by Alternative 3. DOT&PF has adjusted the highway alignment to avoid fill of emergent and palustrine wetlands and sensitive habitats to the greatest extent possible.

Air, Land, and Water Quality (6 AAC 80.140) – During construction, operation, and maintenance of Alternative 3, DOT&PF would ensure compliance with all ADEC regulations regarding water, air, and land quality. BMPs would be used to avoid downstream water degradation below water quality standards.

Historic, Prehistoric, and Archaeological Resources (6 AAC 80.150) – No historic, prehistoric, and archaeological areas of significance are identified in the City of Haines coastal management plan. DOT&PF has worked closely with the State Historic Preservation Officer to complete all necessary cultural resource surveys to identify any areas important to state or local history or prehistory. DOT&PF would implement mitigation measures to protect the Dalton Trail (see Section 4.4.4).

2.2.3.2 City and Borough of Juneau Coastal Management Program Enforceable Policies

The 5.2-mile extension of the highway from Echo Cove to Sawmill Cove and construction of the Sawmill Cove Ferry Terminal would be within the CBJ Coastal Zone Management District. For this reason, only the following enforceable policies are applicable to Alternative 3.

Coastal Development (49.70.905) – DOT&PF would comply with the coastal development policies through use of BMPs for design and construction to avoid or minimize hazards. Dredging and filling necessary for construction of the highway would be avoided to the greatest extent possible in highly productive tidelands or wetlands, subtidal lands important for shellfish, and habitat important for resident or anadromous fish. All in-water construction for the Sawmill Cove terminal would be completed in such a way as to not change water circulation patterns and to minimize shoreline alterations. Transportation facilities are exempt from meeting the policy prohibiting intertidal fill below mean high tide.

Geophysical Hazards (49.70.910) – Alternative 3 would comply with these policies by reducing erosion possibilities and visible scarring to the landscape through mitigation and BMPs during design and construction. Areas impacted during construction would be revegetated with native species where necessary. Anadromous fish streams would be spanned. Small flood plains of streams that do not support anadromous fish would be crossed with culverts. Where construction within the floodplain is necessary, facilities would be constructed to meet 100-year flood requirements.

Transportation and Utilities (49.70.925) – DOT&PF to the extent feasible, has located the highway alignment and Sawmill Cove Ferry Terminal to avoid wetlands, intertidal marshes, and aesthetic degradation. DOT&PF has moved the alignment for Alternative 3 to avoid all emergent wetlands on the east side of Lynn Canal and reduce impacts to palustrine wetlands. All anadromous stream crossing would be designed to avoid impacts to fish passage and habitat disturbance including the avoidance of in-stream work during spawning or times of critical period for anadromous fish. Where possible, the highway alignment has been adjusted to avoid sensitive coastal areas.

Fish and Seafood Propagation and Processing (49.70.930) – All anadromous stream crossings and EFH crossed by Alternative 3 would be designed and constructed as to have no impact to spawning or migration of these fish species or impacts that may degrade water quality (see Air, Land, and Water Quality 49.70.955).

Timber Harvest and Processing (49.70.935) – Land clearing and timber harvest conducted as part of the construction of Alternative 3 would be done to minimize any environmental impacts, and to avoid impacts to movement of fish in coastal waters. No log processing facilities, in-water log dumping and storage, or additional roads are proposed as parting of the clearing and timber harvesting.

Habitat (49.70.950) – Impacts to coastal habitat areas within the CBJ district are identified and mitigated to the greatest extent possible to maintain habitat values of wetlands, tideflats, rivers, and streams. DOT&PF has adjusted the highway alignment to avoid fill of emergent wetlands and palustrine wetlands and in sensitive habitats to the greatest extent possible. In addition to changes to the alignment, a minimum-width fill footprint with steepened slopes would be used for the highway in wetland areas to reduce the footprint. Impacts to tideflats from the ferry terminal at Sawmill Cove would be minimized by timing construction to avoid impacts to fish, by using clean fill, and by minimizing the terminal and dredging footprints to the smallest size practicable. The remaining undisturbed tideflats in Sawmill Cove would be of sufficient size to continue to provide adequate important habitat for fish and wildlife. Impacts to streams would be mitigated by a clearspan bridge over Sawmill Creek, an anadromous fish stream, and by the use of BMPs to avoid water quality impacts. Based on these measures, and because of the large size of remaining wetland and tideflat habitats in the project area, the habitats in wetlands, tideflats, and streams would continue to sustain the biological, physical, and chemical characteristics necessary to support living resources. During final engineering design of the selected alternative, DOT&PF would continue to investigate ways to further minimize encroachment on wetlands and tideflats. If Alternative 3 were selected, further consultation with NMFS and OHMP would occur to determine whether additional conservation measures regarding herring spawning in Sawmill Cove would be required.

Air, Land, and Water Quality (49.70.955) – During construction, operation, and maintenance of Alternative 3, DOT&PF would ensure all ADEC regulations are met. BMPs would be used to avoid downstream water degradation below water quality standards.

2.2.3.3 Haines Coastal Management Program Enforceable Policies

The connection of the Chilkat River bridge, from the mean lower low water line to the Mud Bay Road, in Haines, would be subject to the Haines District Coastal Management Plan. Pyramid Island is outside the Haines Coastal District.

Coastal Development (A-1 through A-7, A-9 through A-12) – DOT&PF would comply with the applicable Coastal Development policies through use of BMPs for design and construction to avoid or minimize hazards. Dredging and filling necessary for construction within the district would avoid to the greatest extent possible highly productive tidelands, wetlands, or subtidal lands important for fish. No wetlands or anadromous streams within the Haines coastal district would be impacted by this alternative. All in-water construction would be completed in such a way as not to change water circulation pattern and minimize shoreline alterations where the Pyramid Island Bridge joins the Chilkat Peninsula.

Geophysical Hazard Areas (B-1 through B-3) – DOT&PF would comply with these policies by reducing erosion possibilities and reducing visible scarring to the landscape through mitigation and BMPs during design and construction. Areas impacted during construction would be revegetated with native species where necessary.

Recreation and Tourism (C-3 through C-7) – DOT&PF would maintain public access to waters within the Chilkat Inlet. DOT&PF would also ensure any easements and rights of way for public and private landowners within the Alternative 3 alignment are maintained.

Transportation and Utilities (E-2 through E-4) – DOT&PF through BMPs and necessary mitigation measures would limit adverse impacts to habitats, biological resources, coastal resources and uses, and recreation and traditional subsistence use activities. Further, design of the Pyramid Island Bridge would be designed to maintain water circulation in harbor areas.

Habitats (J-2, J-3A, J-6, andJ-7) – Design, operation, and maintenance of the Pyramid Island Bridge would maintain the habitat values of the tideflats for anadromous fish (rearing, migration, overwintering, access to spawning habitat), bald eagles, humpback whales, and Steller sea lions. Impacts to tideflats would be minimized by timing construction to minimize impacts to fish, using clean fill, and by placing the east abutment of the Chilkat River/Inlet crossing above the high tide line on the Chilkat Peninsula. The habitats would continue to sustain the biological, physical, and chemical characteristics to support living resources.

Historic, Prehistoric, and Archaeological Resources (L-2 and L-3) – DOT&PF has worked closely with the SHPO to complete all necessary cultural resource surveys to identify any areas important to state or local history or prehistory.

2.2.4 Subsistence

Alternative 3 would not impact subsistence hunting on Sullivan, Lincoln, Shelter, Chichagof, or Admiralty islands, the lands adjacent to Taiya Inlet, and the south shore of James Bay. It would not impact subsistence fishing in Taiya Inlet or subsistence hunting of marine mammals anywhere in Lynn Canal.

Alternative 3 would have no direct effects on subsistence uses. Improved access to subsistence use areas along the Alternative 3 alignment in the Sullivan River area could indirectly affect the intensity of subsistence harvest and the availability of resources. Alternative 3, together with USFS plans for potential public access locations along the highway, would make Lynn Canal much more accessible for other hunters. Alternative 3 could increase competition for subsistence resources from recreational hunting and fishing. These changes to subsistence opportunities would be viewed as beneficial for some subsistence harvesters, but others would perceive the increased competition for resources as a negative impact.

Based on the 1998 USFS subsistence study, the 1994 ADF&G analysis of subsistence impacts, the 2003 scoping comments for the Supplemental Draft EIS, the Supplemental Draft EIS hearing and written comments, and an analysis of these sources of information, FHWA has determined that Alternative 3 would not significantly restrict subsistence uses.

2.3 Alternatives 4A and 4C

2.3.1 Coastal Zone Management

Modifications of the existing ferry terminal at Auke Bay would need to be consistent with the enforceable policies of the ACMP and the CBJ coastal management plan. In accordance with the Coastal Zone Management Program, DOT&PF will obtain a determination from ADNR of consistency of the selected alternative with the state coastal management program and the

Juneau coastal management plan prior to obtaining the necessary state and federal permits for the project.

The following is a brief description of how Alternatives 4A and 4C would be consistent with the major statewide standards and district coastal management enforceable policies. This discussion is based on existing statewide standards and coastal district policies. ADNR is currently in the process of obtaining federal approval of revised ACMP statewide standards and is currently working with coastal districts to revise coastal district enforceable policies. The enforceable policies under 6 AAC 80 are currently used until ADNR receives approval on the amendment to the ACMP from the National Oceanic and Atmospheric Administration, OCRM.

2.3.1.1 Statewide ACMP Standards

Habitats (6 AAC 80.130) – DOT&PF has coordinated with state and federal agencies to identify coastal habitats that may be impacted by Alternatives 4A and 4C. Construction, operation, and maintenance would be implemented to avoid impacts to coastal habitat.

Air, Land, and Water Quality (6 AAC 80.140) – During operation, DOT&PF would ensure compliance with all ADEC regulations regarding water, air, and land quality.

2.3.1.2 City and Borough of Juneau Coastal Management Program Enforceable Policies

The only portion of Alternatives 4A and 4C within the CBJ coastal zone district would be the construction of new stern berths in Auke Bay.

Coastal Development (49.70.905) – DOT&PF would comply with the applicable coastal development policies through use of BMPs for design and construction to avoid or minimize hazards. Dredging and filling necessary for construction would be avoided to the greatest extent possible in highly productive tidelands or wetlands, subtidal lands important for shellfish, and habitat important to anadromous fish. All in-water construction would be completed in such a way as to not change water circulation patterns and to minimize shoreline alterations.

Habitat (49.70.950) – Impacts to the tideflat habitat areas at Auke Bay would be mitigated to the greatest extent possible to maintain habitat values. Some of the measures to mitigate impacts to tideflats are timing in-water work to avoid impacts to fish and the use of clean fill.

Special Waterfront Areas (49.70.960) – Reconstruction at the existing Auke Bay Ferry Terminal would be located within a Special Waterfront Area managed by a coastal management enforceable policy unique to the CBJ. Fill proposals within the special waterfront area are not subject to a fill prohibition of the Juneau Coastal Development Enforceable Policy 49.70.905(13) regarding whether a project is water dependent or water-related (49.70.960(a)(2)). Also, the significant public need and feasible and prudent alternative analysis under the Juneau Habitat Standard 49.70.950(d) does not apply to state projects (49.70.960(a)(6)). The ferry terminal reconstruction activities would comply with 49.70.960(b)(1)(B), meeting water-relevancy requirements of 49.70.905 for floats, docks, and dolphins.

Air, Land, and Water Quality (49.70.955) – During construction, operation, and maintenance of Alternatives 4A and 4C, DOT&PF would ensure all ADEC regulations are met.

2.4 Alternatives 4B and 4D

2.4.1 Consistency with Land Use and Management Plans

2.4.1.1 Roadless Areas

Alternatives 4B and 4D would extend Glacier Highway 5.2 miles from Echo Cove to a ferry terminal in Sawmill Cove; approximately 2.1 miles of the highway would be constructed within Area 301. For the most part, Alternatives 4B and 4D would be near the shoreline, resulting in a narrower, less than 2,500-foot-wide corridor, due to the small amount of land on the shoreward side in some places. In Roadless Area 301 over 2.1 miles from Cascade Point to Sawmill Cove, Alternatives 4B and 4D would create a road effect corridor 1,300 to 2,500 feet wide, affecting 293 acres on the shoreward side (west side) of the highway alignment and affecting 349 acres on the upland side (east side) of the alignment. The total area of road effect for Alternatives 4B and 4D within Area 301 would be about 642 of 1,201,474 acres.

Roadless Area Capability – Natural Integrity and Appearance (Apparent Naturalness) and Opportunity for Solitude – The road effect corridor would not change the natural integrity and appearance or opportunity for solitude in the majority of Area 301. While Roadless Area 301 would be decreased by the Alternatives 4B and 4D road effect corridor, the decrease would be a very small percentage. Roadless Area 301 is mostly unmodified and in a natural appearing condition, and it includes a very large undeveloped land area, containing 1,201,474 acres. Non-Development LUDs make up 98 percent, and Area 301 provides primarily primitive recreation opportunities. The boundary of the roadless area would be adjusted to exclude the road effect corridor. The remaining acreage of Area 301 would continue to be eligible for wilderness designation under the National Wilderness Preservation System, because it would contain at least 5,000 acres with no roads and retain a roadless character.

Roadless Area Management Consistency – Alternatives 4B and 4D are consistent with management direction for Roadless Area 301 in Appendix C of the USFS 2003 TLMP Supplemental EIS, Section III(8) “Availability for Management as Wilderness.” The TLMP Appendix C states that the highway would be within Area 301, and “the Forest Plan retains a proposed state road corridor … along this area.”

Old-Growth Forest Habitat Reserves – Alternatives 4B and 4D would not impact any mapped Old-Growth Forest Habitat reserves. The highway segment for these alternatives would go through old-growth forested areas within lands designated as Non-Development LUDs that function as medium and/or large old-growth forest habitat reserves. Alternatives 4B and 4D would reduce the size of the old-growth forest habitat reserves in all VCUs, as well as create a separation of some old-growth forest areas into downslope and upslope areas. These alternatives would remove approximately 25 of 74,470 acres of old-growth forest along the east side of Lynn Canal (USFS, 2003).

The USFS, in consultation with ADF&G and USFWS, would adjust the boundaries of the Old-Growth Forest Habitat LUDs affected in accordance with old-growth forest habitat reserve standards in the TLMP.

2.4.2 Land and Resource Uses

2.4.2.1 Roadless Areas as a Resource

The land affected by Alternatives 4B and 4D is mostly along the waterfront area of the south part of Berners Bay. This results in a less intrusive development, leaving the larger portion of Area 301 unaffected and available for apparent naturalness and opportunities for solitude. Also, the highway would be in an area already affected by frequent water and air traffic and other activities.

Under Alternatives 4B and 4D, recreationists would access Area 301 by highway in the vicinity of Cascade to Sawmill Cove. The access to the majority of Area 301 would not change. At the point of access from the highway, recreationists would be exposed to development and human activity.

Impacts from Alternatives 4B and 4D to the natural integrity and apparent naturalness and opportunity for solitude would be limited to the area of the Cascade Point vicinity to Sawmill Cove. Because there is currently a significant amount of recreation use in Berners Bay, and there are activities on adjacent land near Berners Bay, the effects of Alternatives 4B and 4D to solitude would be less in Berners Bay than other areas along the corridor.

Roadless Area 301, in the area affected by Alternatives 4B and 4D, is split into three classes in the USFS ROS system. One ROS class is a narrow strip adjacent to the shore of the east side of Lynn Canal. Upland of the narrow shoreline strip, is a Semi-Primitive Non-Motorized ROS. The remaining land in Area 301, further upland of the Semi-Primitive Non-Motorized ROS, is a large area classified as Primitive Recreation ROS. Based on these configurations, the primary ROS for Area 301 is Primitive (90 percent of the roadless area). Alternatives 4B and 4D would be within the narrow shoreline strip in the current Semi-Primitive Motorized ROS setting.

TLMP provisions allow the USFS to change recreation settings in locations where approved activities would affect the ROS settings. The ROS settings where Alternatives 4B and 4D would occur would be changed to Roaded Natural.

Roadless Area Capability – Scientific and Education Values – The Alternatives 4B and 4D road effect corridor would not affect any identified scientific and education areas in Area 301. The following features were identified: glaciers and icefields, and a Research Natural Area at Warm Pass.

2.4.3 Coastal Zone Management

Proposed facilities for Alternatives 4B and 4D are located in the coastal zone. The highway from Echo Cove to Sawmill Cove and the proposed Sawmill Cove Ferry Terminal are within the CBJ coastal management plan. Therefore, Alternatives 4B and 4D would need to comply with the enforceable policies of the ACMP and the CBJ coastal district plan.

The topics addressed by the enforceable policies of the ACMP and the coastal management plans that are relevant to Alternatives 4B and 4D are coastal development; geophysical hazards; recreation; transportation and utilities; subsistence; biological habitats; air, land, and water quality; and prehistoric and historic resources. These policies provide goals and performance criteria for activities within the coastal zone, including transportation projects.

Alternatives 4B and 4D have been sited in consideration of the enforceable policies of the ACMP and the coastal management plans. These enforceable policies would also be considered in the development of design parameters for the alternative selected for the proposed project. In accordance with the CZMP, DOT&PF will obtain a determination from ADNR of consistency of the selected alternative with the state coastal management program and applicable coastal management plans prior to obtaining the necessary state and federal permits for the project.

The following is a brief description of how Alternatives 4B and 4D would be consistent with the major statewide standards and district coastal management enforceable policies. This discussion is based on existing statewide standards and coastal district policies. ADNR is currently in the process of obtaining federal approval of revised ACMP statewide standards and is currently working with coastal districts to revise coastal district enforceable policies. The enforceable policies under 6 AAC 80 are currently used until ADNR receives approval on the amendment to the ACMP from the National Oceanic and Atmospheric Administration, OCRM.

2.4.3.1 Statewide ACMP Standards

Geophysical Hazard Areas (6 AAC 80.050) – DOT&PF has identified and mitigated known geophysical hazards through preliminary design measures.

Recreation (6 AAC 80.060) – DOT&PF would maintain public access to coastal waters. There are no recreation areas designated by coastal districts in the project area.

Habitats (6 AAC 80.130) – DOT&PF has coordinated with state and federal agencies to identify coastal habitats that may be impacted by Alternatives 4B and 4D. DOT&PF has adjusted the highway alignment to avoid all emergent wetlands and to avoid palustrine wetlands and sensitive habitats to the greatest extent possible.

Air, Land, and Water Quality (6 AAC 80.140) – During construction, operation, and maintenance of Alternatives 4B and 4D, DOT&PF would ensure compliance with all ADEC regulations regarding water, air, and land quality. BMPs would be used to avoid downstream water degradation below water quality standards.

2.4.3.2 City and Borough of Juneau Coastal Management Program Enforceable Policies

The 5.2-mile extension of the highway from Echo Cove to Sawmill Cove, construction of the Sawmill Cove Ferry Terminal, and modifications of the Auke Bay Ferry Terminal would be within the CBJ Coastal Zone Management District. For this reason, the following enforceable policies are applicable to Alternatives 4B and 4D.

Coastal Development (49.70.905) – DOT&PF would comply with the coastal development policies through use of BMPs for design and construction to avoid or minimize hazards. Dredging and filling necessary for construction of the highway would be avoided to the greatest extent possible in highly productive tidelands or wetlands, subtidal lands important for shellfish, and habitat important for resident or anadromous fish. All in-water construction for the Sawmill Cove terminal would be completed in such a way as to not change water circulation patterns and to minimize shoreline alterations. Transportation facilities are exempt from meeting the policy prohibiting intertidal fill below mean high tide.

Geophysical Hazards (49.70.910) – Alternatives 4B and 4D would comply with these policies by reducing erosion possibilities and visible scarring to the landscape through mitigation and BMPs during design and construction. Areas impacted during construction would be revegetated with native species where necessary. Anadromous fish streams would be spanned. Small flood plains of streams that do not support anadromous fish would be crossed with culverts. Where construction within the floodplain is necessary, facilities would be constructed to meet 100-year flood requirements.

Transportation and Utilities (49.70.925) – DOT&PF, to the extent feasible, would design the highway alignment, Sawmill Cove Ferry Terminal, and Auke Bay Ferry Terminal modifications to avoid wetlands, intertidal marshes, and aesthetic degradation. DOT&PF has moved the alignment for Alternatives 4B and 4D to avoid all emergent wetlands on the east side of Lynn Canal and to reduce impacts to palustrine wetlands. All anadromous stream crossings would be designed and constructed to avoid impacts to fish passage and habitat disturbance, including the avoidance of in-stream work during spawning or times of critical period for anadromous fish. Where possible, the highway alignment would be adjusted to avoid sensitive coastal areas.

Fish and Seafood Propagation and Processing (49.70.930) – All anadromous stream crossings and EFH crossed by Alternatives 4B and 4D would be designed and constructed as to have no impact to spawning or migration of these fish species or impacts that may degrade water quality (see Air, Land, and Water Quality 49.70.955).

Timber Harvest and Processing (49.70.935) – Land clearing and timber harvest conducted as part of the construction of Alternatives 4B and 4D would be done to minimize any environmental impacts and to avoid impacts to the movement of fish in coastal waters. No log processing facilities, in-water log dumping and storage, or additional roads are proposed as part of the clearing and timber harvesting.

Habitat (49.70.950) – Impacts to coastal habitat areas have been identified and would be mitigated to maintain habitat values of wetlands, tideflats, and streams. Impacts to wetlands have been minimized by adjusting the preliminary alignment to avoid all emergent wetlands and to avoid palustrine wetlands and sensitive habitat to the greatest extent possible. A minimum-width fill footprint would be used for the highway in wetland areas.

Impacts to tideflats would be minimized by timing construction to avoid impacts to fish, using clean fill for the Sawmill Cove Ferry Terminal, and minimizing terminal and dredging footprints to the smallest size practicable. Remaining tideflats in Sawmill Cove would be of sufficient size to continue to provide adequate habitat. Impacts to streams would be minimized by constructing a clearspan bridge over Sawmill Creek, an anadromous fish stream, and using BMPs during culvert installation to protect water quality at other streams. Based on these measures and the large areas of wetland and tideflat habitat in the project area, the habitats in wetlands, tideflats, and streams would continue to sustain the biological, physical, and chemical characteristics to support living resources. If Alternative 4B or 4D were selected, further consultation with NMFS and OHMP would occur to determine whether additional conservation measures would be required to address herring spawning in Sawmill Cove.

Special Waterfront Areas (49.70.960) – Reconstruction at the existing Auke Bay Ferry Terminal would be located within a Special Waterfront Area managed by a coastal management enforceable policy unique to the CBJ. Fill proposals within the special waterfront area are not subject to a fill prohibition of the Juneau Coastal Development Enforceable Policy 49.70.905(13) regarding whether a project is water dependent or water-related (49.70.960(a)(2)). Also, the

significant public need and feasible and prudent alternative analysis under the Juneau Habitat Standard 49.70.950(d) does not apply to state projects (49.70.960(a)(6)). The ferry terminal reconstruction activities would comply with 49.70.960(b)(1)(B), meeting water-relevancy requirements of 49.70.905 for floats, docks, and dolphins.

Air, Land, and Water Quality (49.70.955) – During construction, operation, and maintenance of Alternatives 4B and 4D, DOT&PF would ensure all ADEC regulations are met. BMPs would be used to avoid downstream water degradation below water quality standards.

2.4.4 Subsistence

The only new highway segment for these alternatives would be an extension of an existing Juneau road. Juneau is not a subsistence community under ANILCA. Because Alternatives 4B and 4D would not substantially change transportation facilities and visitor trips in Lynn Canal, they would not result in direct or indirect impacts to subsistence uses.

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FIGURES

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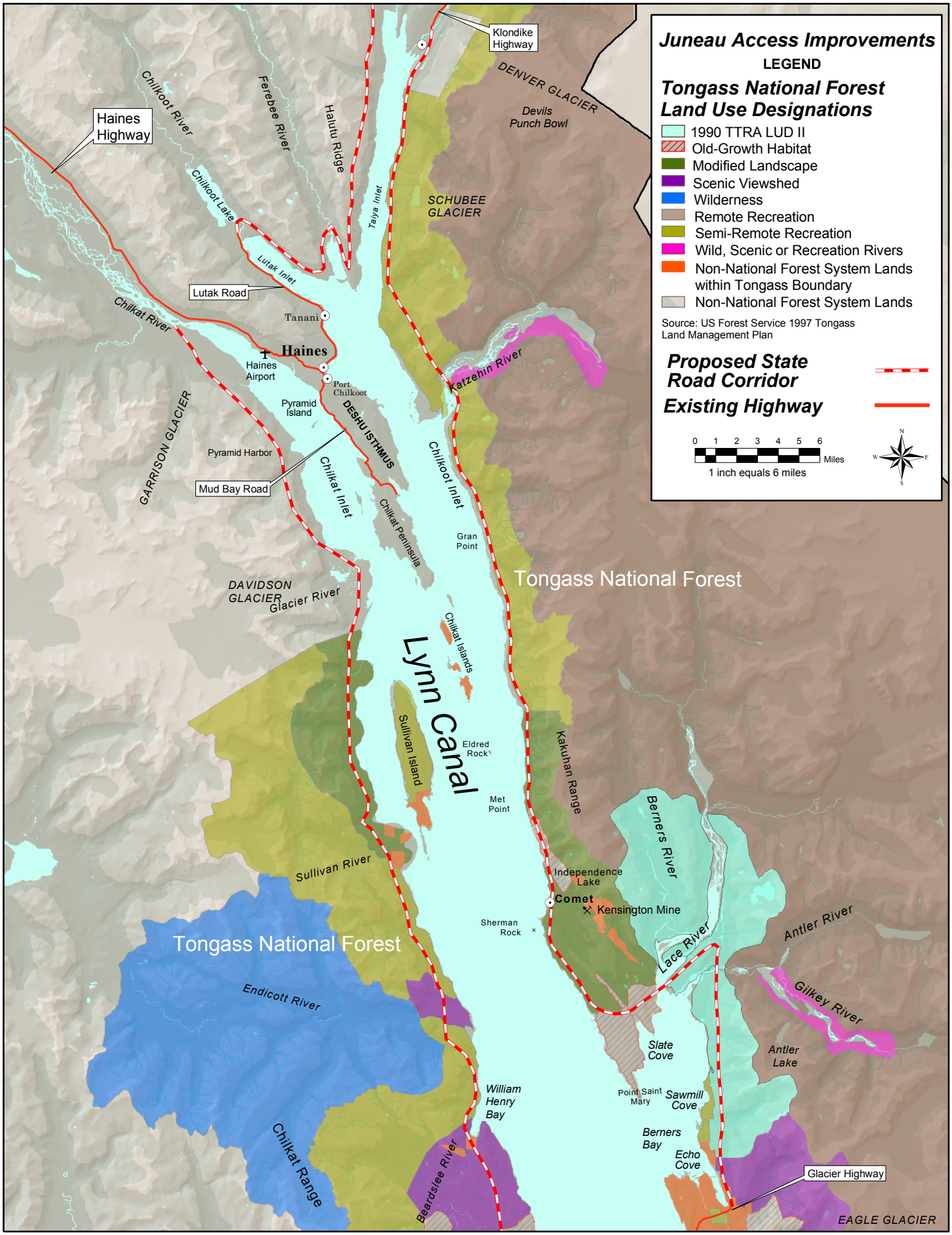

Figure 1
Tongass Land Management Plan Land Use Designations

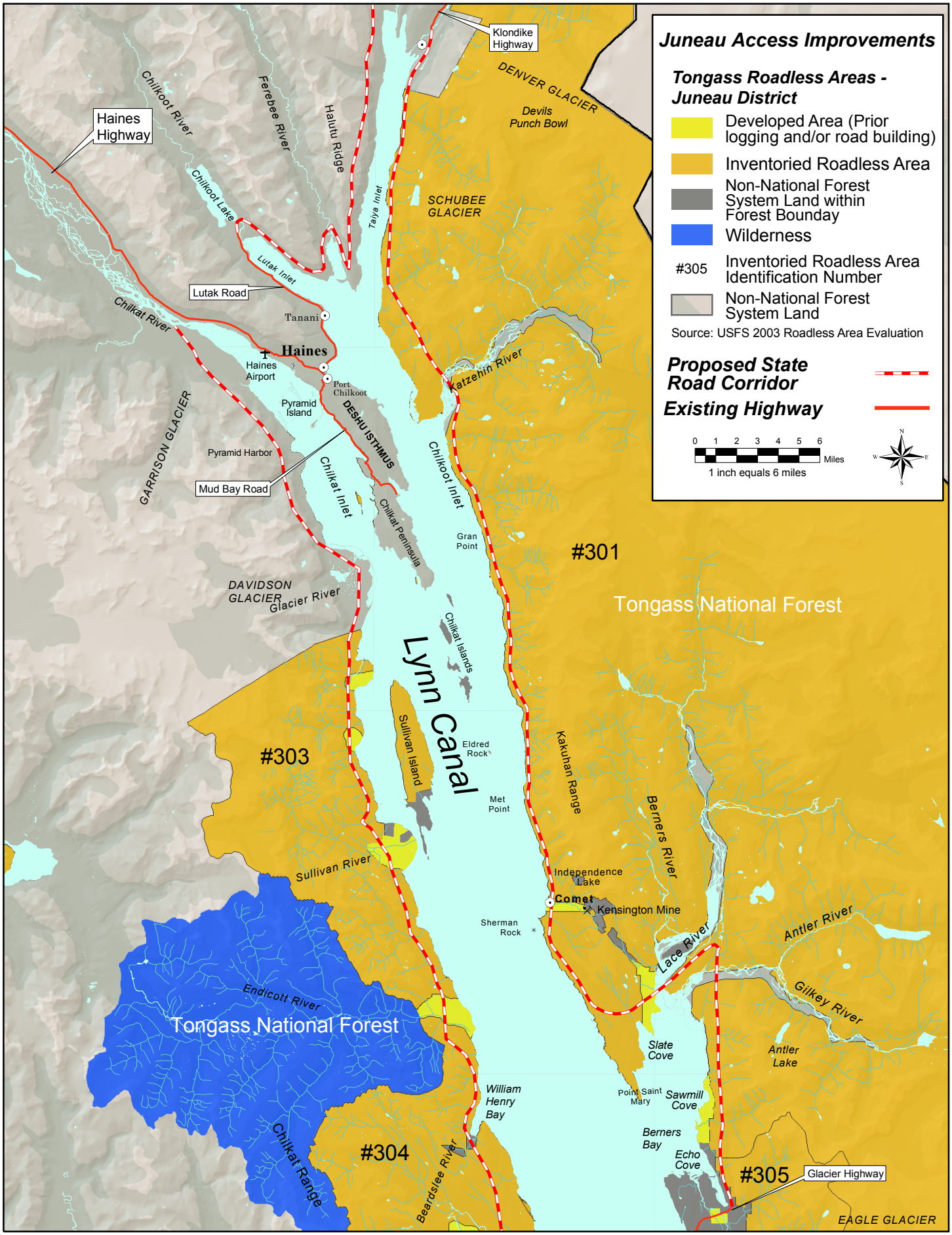

Figure 2
Inventoried Roadless Areas