Turnagain Pass Master Plan

Memorandum 2: Existing Conditions

JUNE 2023

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FIGURES

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APPENDIX 1

ACRONYMS

AADT ..... Average Annual Daily Traffic
ACHP.....Advisory Council on Historic Preservation
ADF&G.....Alaska Department of Fish and Game
ADNR. ..... Alaska Department of Natural Resources
AHRS.....Alaska Heritage Resources Survey
ANILCA .....Alaska National Interest Lands Conservation Act
ATV ..... All-Terrain Vehicle
AWC.....Anadromous Waters Catalog
DOT&PF..... Alaska Department of Transportation and Public Facilities
CAA..... Clean Air Act
CNFLMP… ..... Chugach National Forest Land Management Plan
EPA .....Environmental Protection Agency
ESA ..... Endangered Species Act
FEMA .....Federal Emergency Management Agency
FHWA .....Federal Highways Administration
GHG ..... Greenhouse Gas
INHT… ..... Iditarod National Historic Trail
KMTA NHA .....Kenai Mountains-Turnagain Arm National Historic Area
KPB .....Kenai Peninsula Borough
KPBAP..... Kenai Peninsula Borough Area Plan
LUST .....Leaking Underground Storage Tanks
LWCF .....Land and Water Conservation Fund Act
MMPA .....Marine Mammal Protection Act
MSB ..... Matanuska-Susitna Borough
M&O..... Maintenance & Operations
MP .....Milepost
MPH.....Miles Per House
MVMT ..... Million Vehicle Miles Traveled
NEPA..... National Environmental Policy Act
NFIP .....National Flood Insurance Program
NOAA.....National Oceanic and Atmospheric Administration
NRHP .....National Register of Historic Places
NHPA ..... National Historic Preservation Act
NPS ..... National Parks Service
NWI .....National Wetland Inventory
OHA .....Office of History and Archeology
DPS .....District Population Segment
ROW ..... Right of Way
RV. .....Recreational Vehicle
TPMP .....Turnagain Pass Master Plan
USFS..... United States Forest Service
USACE.....United States Army Corps of Engineers
USDOT..... United States Department of Transportation
USFWS.....United State Fish and Wildlife Service
VPD..... Vehicles Per Day
WFLHD…..Western Federal Lands – Highway Division

1. Study Area Overview

The Turnagain Pass Master Plan (TPMP) is being developed by the Federal Highway Administration (FHWA), Western Federal Lands – Highway Division (WFLHD), in partnership with the State of Alaska Department of Transportation and Public Facilities (DOT&PF) and the United States Forest Service (USFS) to identify ways to better meet the needs of the recreational users accessing USFS recreation lands from the Seward Highway (MP 76-56), in the area known as Turnagain Pass. This memorandum defines the study area, documents the current conditions and possible gaps in relevant information, and identifies next steps related to the current and future potential use of Turnagain Pass recreational facilities.

The existing conditions reviewed in this memorandum includes all existing recreational facilities within this part of the Chugach National Forest with direct access to the corridor, including campgrounds, trailheads, parking lots, pullouts, etc.).

1.1 Turnagain Pass Master Plan Study Area

The TPMP study area is approximately 98,000 acres of the Chugach National Forest, within the Glacier Ranger District. The study area includes the Seward Highway Corridor MP 56-76 (Turnagain Pass) and focuses primarily on access to the Chugach National Forest within the areas between the ridgelines just north and south of the Turnagain Pass corridor, as illustrated in Figure 1-1.

The existing land use and ownership throughout the study area is entirely formed of publicly owned lands by the USFS and the State of Alaska Department of Natural Resources (ADNR) and DOT&PF. The study area graphic (Figure 1-1) displays the Kenai Peninsula Borough parcels for USFS with the Seward Highway corridor winding through Turnagain Pass. The ADNR maintains ownership of land at the beginning and end mileposts of the study area, beginning at approximately MP 76 to MP 71, and again at the intersection of the Seward Highway and Hope Road.

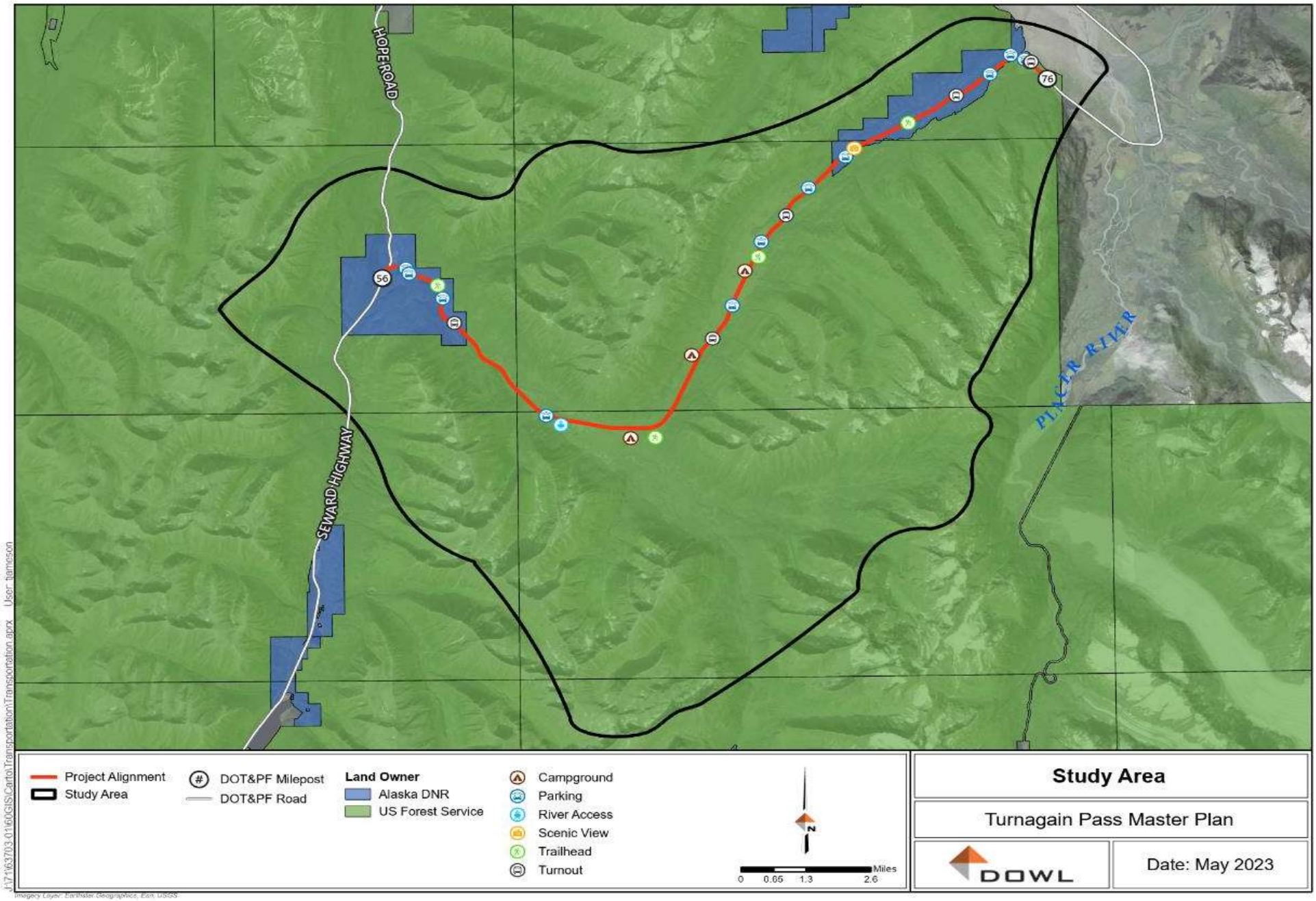


Figure 1-1 Turnagain Pass Master Plan Study Area

1.2 State, Regional, and Local Plans

1.2.1 Chugach National Forest Land Management Plan (2020)

The Chugach National Forest Land Management Plan (CNFLMP) guides all management decisions and activities for the 5.4 million-acre Chugach National Forest by setting guides and constraints for Forest Service personnel. The CNFLMP was formed by considering applicable guiding factors that include laws, regulations, executive orders, policies, practices, and procedures. It is important to consider the CNFLMP's guidelines when establishing recommendations for the TPMP.

The CNFLMP highlights desired conditions which are defined as descriptions of specific social, economic, and ecological characteristics for the area included in the specified land management plan. These desired conditions guide the direction of management of the land and are listed within the CNFLMP by forest-wide district, special area designation, geographic area designation, suitability of lands, and management areas. The CNFLMP specifically points to desired conditions for the Iditarod National Historic Trail (INHT), which is defined as a Special Area and passes through this plan's study area. Desired Conditions stated specific to the INHT are:

- The INHT, a conservation system unit as defined by Alaska National Interest Lands Conservation Act (ANILCA), connects the communities of Seward, Moose Pass, Portage, and Girdwood with a trail system that features world class summer and winter recreation opportunities and celebrates the rich history of the area.
- Partner and volunteer contributions and shared trails stewardship opportunities are expanded on the INHT with an increased focus on maintenance and access. Local communities and partner agencies and organizations are actively involved in the management and maintenance of the trail.
- The USFS cooperates with ADNR in managing public access and cultural resources, and providing interpretation, outreach, and education about the INHT.

The Desired Conditions related to the INHT should be considered within the context of the study area when establishing recommendations for the TPMP.

The Kenai Mountain-Turnagain Arm National Heritage Area (KMTA NHA) Desired Conditions is also identified in the CNFLMP, noted that community-centered initiatives preserving the regions' cultural resources are encouraged and supported in coordination with related stakeholders such as the Kenai Mountains-Turnagain Arm Corridor Communities Association, Alaska Native Tribes, Alaska Native Corporations, National Park Service (NPS), as well as other related communities and partners. The KMTA NHA Forest-wide Desired Conditions in the CNFLMP are relevant to the TPMP effort in the areas of Tribal Relations, External Partnerships, Social and Economic Sustainability, Subsistence, Ecosystem Processes and Conditions, Ecosystem Services, Access and Infrastructure, and Recreation.

External Relationships

- Effective collaborative relationships with entities such as the State of Alaska and federal agencies to identify and resolve interagency land and resource management challenges.
- Community participation and engagement.

Social and Economic Sustainability & Subsistence

- Provide opportunities for the public to learn about Alaska Native cultural history and practices.
- Provide outstanding opportunities for education and connecting people to the outdoors.
- Provide outreach and interpretation to ensure the public is informed about the physical and biological attributes, citizen science opportunities, and visitor safety issues.
- Provide that Alaska residents engaged in subsistence uses have reasonable access to subsistence resources on National Forest lands.

Ecosystem Processes and Conditions & Services

- Ensure National Forest System lands support the ecological processes and conditions necessary to maintain habitat quantity, quality, and distributions to sustain self-supporting populations of native aquatic, riparian, and terrestrial plants, fish, and wildlife.
- Native plants, fish, and wildlife are the dominant species inhabiting National Forest System lands, while the establishment and spread of invasive species is prevented or minimized and does not threaten ecosystem function.
- Existing aquatic, riparian, and terrestrial habitat connectivity is maintained to promote conservation of native plants, fish, and wildlife.
- In places most commonly visited and viewed by the public, the national forest visitor sees intact landscapes with minimal variation from the existing landscape character type. Scenic characteristics retain the distinctive landscape character and sense of place associated with the Chugach National Forest.

Access and Infrastructure

- A system of roads, trails, and areas designated for non-motorized vehicle and motor vehicle use is identified and is available for public use to access National Forest System lands. Roads and trails are efficiently managed, have minimal effect on aquatic and terrestrial systems, and meet Forest Service national quality standards.
- Administrative facilities serve the land management needs and purposes of the national forest in a sustainable, economical, and cost-effective manner. The size, number, and

location of facilities meet current and future management needs commensurate with Forest Service financial capabilities and are consistent with forest-wide facility planning.

- Administrative facilities are affordable, safe, and energy efficient; and meet all applicable physical security and accessibility standards and guidelines. Wildlife friendly designs are considered and incorporated into facilities during construction.
- Existing and future facilities are included in a current facilities master plan and are consistent with direction in The Built Environment Image Guide for the National Forests and Grasslands.

Recreation

- Access to winter recreation opportunities is maintained or enhanced through a collaborative effort between the Forest Service, local communities, other agencies, and partner organizations to provide snowplowing of parking lots and trail grooming (where authorized).
- Recreation sites and trail systems are ecologically, economically, and socially sustainable and are supported by communities and partners through shared infrastructure development and maintenance, delivery of information, and provision of recreation services
- The number and location of recreation facilities reflect current and future public needs and demand commensurate with Forest Service financial capabilities and are consistent with forestwide recreation facility planning.
- Forest management activities are integrated with recreational opportunities and infrastructure, and adverse impacts to recreation settings are minimized or mitigated, consistent with forestwide and management area direction.
- National forest visitors are aware these environments are frequented by wildlife. Visitors are informed of appropriate behaviors to minimize their chance for adverse interactions with animals, reducing risks for both humans and wildlife.
- A diverse range of recreation settings is sustained, and settings are spatially and seasonally distributed.

The CNFLMP's list of Desired Conditions provides a connection to the purpose of the TPMP by stating support for the future of any Forest land access, educational opportunities, and recreation, including the Turnagain Pass area. As the master planning effort continues, providing recommendations that continue to advance the Desired Conditions in CNFLMP will be crucial step to the master plan's implementation phase.

1.2.2 DOT&PF Seward Highway Corridor Partnership Plan (1998)

The Seward Highway Corridor Partnership Plan was prepared for DOT&PF as part of the submission of the Seward Highway for designation under the National Scenic Byways Program. The plan provides "a strategy for management, economic development, and conservation," and sought to meet the requirement that communities seeking national recognition for a particular route have taken time to assess the unique qualities, identify issues, opportunities, concerns, and possible threats to the area's ability to attract visitors and the quality of development.

The plan names three keystone strategies with additional critical actions that would assist in reaching the overarching goals. These include:

- The Seward Highway providing a safe, aesthetic, and world class driving experience
- Providing effective visitor management to support long-term economic development through tourism
- Limiting haphazard development that poses a threat to the highway's ability to attract visitors and quality development

These keystone strategies include 37 distinct actions items, many of which are still relevant to today's master plan effort. The topic areas within the 1998 Partnership plan that are relevant to the TPMP include:

- View management
- Pullouts
- Bike paths
- Scenic Highway identification signage
- Turning lanes
- Shoulders
- Traffic calming and speed management
- Rest Area Strategy
- Recreational Vehicle (RV) Dumpsite Facilities

Recreation needs and issues identified in the 1998 Plan focused on the need for additional day use areas, trailheads to increase access, identification of uses for federal and state-owned lands, and providing independent travelers education on potential hazards such has avalanche activity, wildlife, and falling rocks. This plan continues to supply valuable historic documentation of the needs and desires along the Seward Highway.

1.2.3 DOT&PF Seward Highway Corridor Study MP 0-90 (2022 DRAFT)

DOT&PF conducted a corridor study for the Seward Highway corridor from MP 0 to 90, where MP 0 begins in the city of Seward to the intersection at Girdwood (MP 90). The final report is currently in draft form, and the study was viewed as an opportunity to learn from the public their usage of the Seward Highway. The corridor study examines strengths, challenges, and improvements, while also finding the desired future of the corridor based on public input and analysis of existing conditions.

The 2022 draft plan focuses on existing conditions such as crash reports and safety issues, right-of-way (ROW) availability and conflict/intersections with the Alaska Railroad, non-motorized routes, land use and adjacent development, existing plans and studies, roadway infrastructure, pullouts, parking, signage, recreational facilities, and past projects along the corridor. Information and data gaps were also identified such as guardrail quality and locations, traffic counts by month, average speeds per hour to track congestion, decibel levels on trails near the highway, rest area and trailhead usage counts, complete roadway signage inventory, and non-motorized traffic counts.

The Seward Highway Corridor Study provides useful information to inform the TPMP by considering the needs of recreational users while supporting safe access and mobility along the Seward Highway for all travelers.

1.2.4 Kenai Peninsula Borough Area Plan (2001)

The Kenai Peninsula Borough Area Plan (KPBAP) was prepared in 2001 by the ADNR Division of Mining, Land and Water. The Seward Highway is identified as being nationally recognized for its outstanding tourism and recreation values and designated as an All-American Road. The KPBAP notes the primary attraction of the Seward Highway is the beautiful scenery the corridor offers to motorists and highlights Sixmile and Canyon creeks, summit, trails and Kenai lakes and Turnagain Pass.

Recreation goals named include the creation of additional public use opportunities, stating lands will be provided for accessible outdoor recreational opportunities with well-designed, maintained and conveniently located recreation facilities.

The KPBAP also addresses the need for nodal development areas, corridor development areas, and corridor preservation areas, as unorganized development can be a threat to the scenic characteristics of the Seward Highway.

Transportation goals identified in the KPBAP focused on supporting plan designations, minimizing costs and adverse effects, promoting efficiency, and supporting public safety. Additional goals focus on solutions for accommodating public access, safety requirements and recreational and tourism use.

1.2.5 Kenai Peninsula Borough Comprehensive Plan (2019)

Adopted November 5, 2019, the Kenai Peninsula Borough (KPB) Comprehensive Plan states community values including strong community connections, economic opportunity, beautiful scenery and wildlife, and abundant natural resources. The future of the peninsula is seen as an expansion and diversity of economic opportunities, protection of natural resources and maintenance of infrastructure and services.

The KPB Comprehensive Plan identifies fulfilling its recreation goals as an opportunity to diversify and grow the Kenai Peninsula Borough economy. Goals for recreation include:

- Supporting outdoor recreation and tourism opportunities for a wide range of users
- Improving recreational trails, access, and mobility
- Protecting and expanding the quality of recreation and tourism appeal
- Expanding recreation and tourism marketing, education, and job training opportunities
- Actively building partnerships needed to maintain, improve, or expand recreation and tourism facilities and amenities

KPB Comprehensive Plan's recreational goals will be further supported by the development of the TPMP by addressing improvements, access, and furthering partnerships with the stakeholders identified as a part of the public engagement strategy.

2. Recreation Infrastructure

2.1 Existing Corridor

The existing corridor's adjacent facilities include a mix of recreational and tourism opportunities for a diverse group of users year-round. Facilities along the corridor include campgrounds, trailheads, turnouts, rest areas, parking, scenic views, and river access. The existing facilities within the corridor are displayed in Figure 2-1.

A site visit[1] of the study area was conducted on August 22, 2022 by a team of staff from FHWA WFLHD, DOT&PF, and USFS to document the existing facilities along the corridor and provide an updated context for observed facility use, current levels of maintenance, and observe the current conditions of the corridor and existing access to the Turnagain Pass area. The following summary of facilities include the locations, observed current uses, and identified issues to consider as recommended by the earlier mentioned team. The site visit summary is found in Appendix A.

[1] FHWA WFLHD, DOT&PF, USFS. Turnagain Pass Master Plan Site Visit Summary. 2022 August 12.

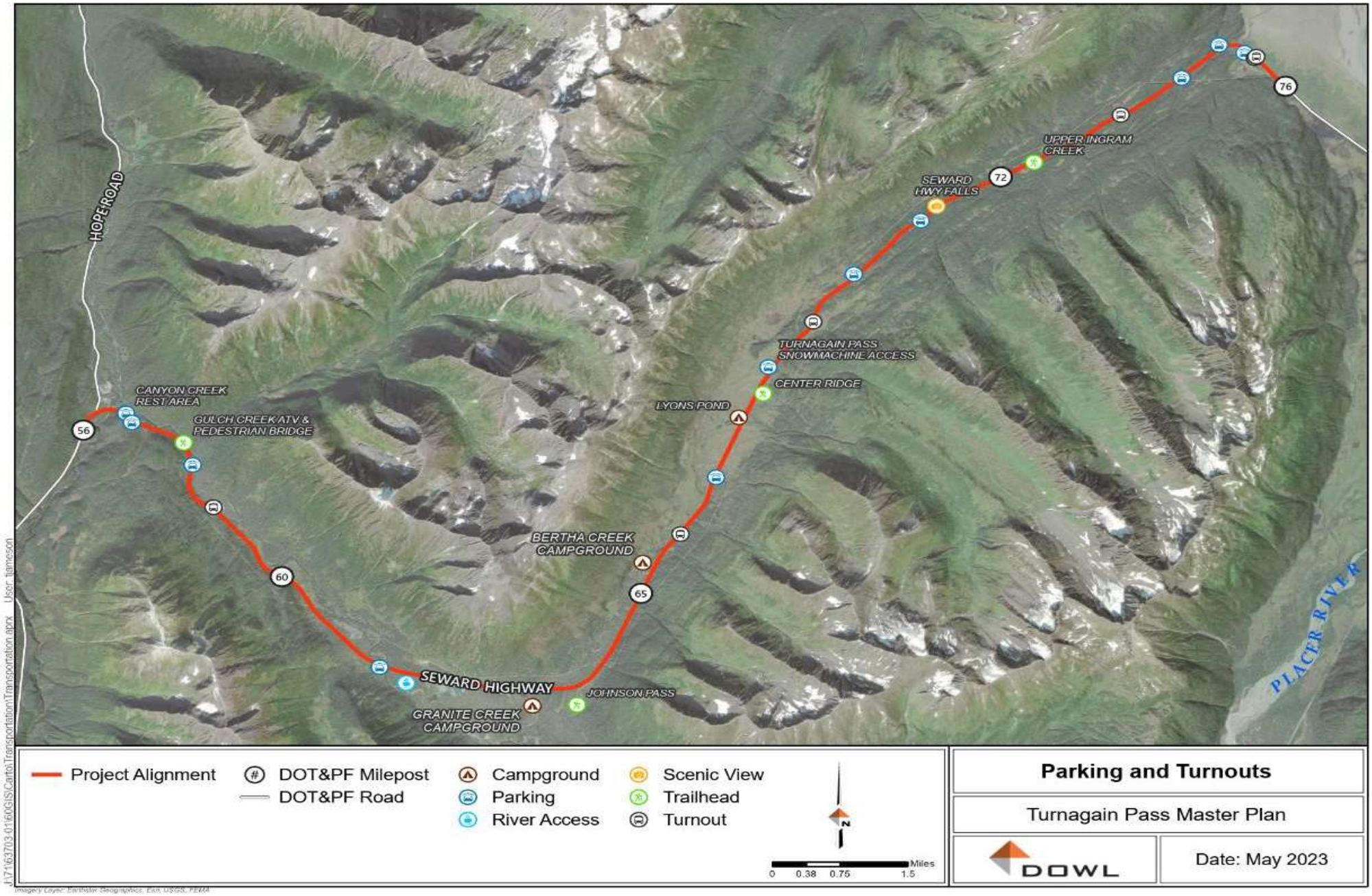


Figure 2-1 Existing Recreation Locations

2.2 Parking Areas and Roadside Pullouts

Canyon Creek Rest Area

Located at MP 56 on the west side of the highway and MP 56.1 on the east, Canyon Creek Rest Area is owned and operated seasonally by Alaska DOT&PF. The west location offers travelers two toilets, ample parking, access to dumpsters, some paved trail access, and some scenic views. The east rest area offers two rest rooms, limited parking, dumpsters and limited views.

Gravel Pit

Located at MP 61.1 on the east side of the Seward Highway, this gravel pit entrance up to a locked gate is plowed and maintained by DOT&PF, this currently allows for up to two to four cars to park in the area Current signage on the Seward Highway identifies this area as Granite Creek recreation area, which is inaccurate for the current conditions. During the winter months this area has been used as a helipad for skiing and a snowmachine terminus. In the summer months it is believed that this area is being used as an information shooting range. It is anticipated that 100,000 tons of gravel from the gravel pit is scheduled for use on upcoming Seward Highway construction projects and will conclude mining activities, potentially providing an opportunity for recreational access use only.

Cornbiscuit Pullouts

Cornbiscuit pullout has been identified as an unpaved pullout with a single driveway located at MP 65.1. It is often used for parking for popular backcountry ski destinations on the mountains above in the winter.

Sunburst Pullout

Sunburst pullout has been identified as a paved pull out on the east side of the Seward Highway with one driveway located at MP 65.9 and a second located at MP 66. It is often used for parking for popular backcountry ski destinations on the mountains above in the winter.

Motorized Vehicle Area Access

This lot has been identified has having two driveways on the west side of the Seward Highway, one at 67.4 and an additional one at MP 67.6 and provides access for snowmachines on public lands, meaning it is most frequently used for snowmachine parking in the winter months. Signage leading up to the lot identify the location with an official brown United States Forest Service sign that reads “Turnagain Pass Rest Area” with icons for restrooms, picnic tables, snowmachining, and skiing. A smaller blue triangular sign stating rest area and an arrow pointing to the lot with an icon showing a snowmachine.

According to staff at USFS, there are restrooms available on site that are often used as a makeshift rest area when the official rest area located at MP 56 is closed for the winter season. This increase from the initially anticipated use including many general highway users just passing through who are not necessarily using the surrounding Forrest Service Lands has led to maintenance issues due to the cost to provide pumping services.

Snowstake Lot

A lot was identified at MP 68.9 is surrounded by State owned land and despite often being referred to by the public as the "DOT lot" the lot is not DOT&PF owned, maintained, or plowed. An defunct weather station is located on the lot, but it is most frequently used as an up-trail access point for snowmachines to access Seattle Ridge and during the summer a vantage point for informal target shooting. During the early parts of the winter recreation season, trucks will drive through for ski access prior to heavy snowmachine usage.

Base of Pass

The base of the pass pullout and parking area is located at MP 74.5 on both the east and west side of the Seward Highway is the starting point of the study area. Serving both sides of the highway, this area is managed by DOT&PF and is intended to be an area for travelers to chain and unchain their tires before entering or exiting Turnagain Pass during winter conditions. This area is often used as an informal camping area, DOT&PF construction staging, and parking for recreationists. Enforcement of improper use is difficult due to the limited number of state troopers for the entire corridor. This area sees an increase of usage in the summer months due to the popularity of Pink Salmon fishing and has the potential to see a significant increase of usage with futural trail parking as the Turnagain Pass Trail is extended to sea level and as the Portage Curve Bicycle Path is constructed.

2.3 Recreational Infrastructure

The Turnagain Pass area is surrounded by the Chugach National Forest. The Chugach National Forest is the farthest north and west of all national forests found within the United States, and has 96 separate watersheds, 41 public use cabins, 500 miles of trail, and is equivalent to the size of New Hampshire. With all the forest has to offer, there are only 90 miles of Forest Service roads serving the area that brings in approximately 500,000 visitors annually[2] for recreation.

[2] 2021 Chugach National Forest Visitors Guide. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd1008905.pdf. Accessed 2023.

West and East Side: Motorized & Non-Motorized Users. In the winter months, the west side of Seward Highway through Turnagain Pass is open for motorized use and has become a popular destination for snowmachining, resulting in parking lots along the pass to be at capacity during the winter months. The east side of Turnagain Pass is made up of numerous trailheads that access the Turnagain Pass Trail, as well as a segment of INHT. Recreationists on the east side of Turnagain Pass can enjoy hiking (backpacking and day hiking), mountain biking, skiing/snowboarding, cross country skiing/snowshoeing, and fat tire biking.

For individuals who prefer participating in recreation under the guidance of trained professionals, USFS issues approximately 250 permits annually for guided activities that include hunting, fishing, flightseeing, boat charters, rafting, kayaking, bird watching, scenic tours, and wildlife viewing for the whole of Chugach National Forest. Of the 250 permits issued annually, 19 of which operate using recreation areas within the study area.

2.3.1 Trails and Trailheads

The study area contains four trailheads that provide access to 12 identified and documented trails (Figure 2-2) that are popular with residents from neighboring areas such as Anchorage, Matanuska-Susitna, and Kenai Peninsula Boroughs due to the close proximity and ease of access along the Seward Highway corridor.

Iditarod National Historic Trail – Southern Trek

The INHT– Southern Trek is a 180-mile portion of the overarching INHT that is 1,000 miles long. The INHT was once used by Alaska Native cultures and in more recent history (late 1800s to early 1900) winter travelers.[3]

Turnagain Pass Trail

Turnagain Pass Trail is a 12-mile segment of the INHT. The center of the trail is located at Center Ridge Trailhead where in either direction (north or south) the trail is six miles. The whole trail is identified as more difficult with elevation gain of 800 feet. Recreationists can experience hiking though spruce and hemlock forests in lower elevations and sub-alpine terrain in higher elevations. The sub-alpine areas offer additional off-trail recreation activities including campsites that provide bear box storage.

The southern portion of the trail passes over gorges at Bertha and Spokane Creeks and provides access to view nearby waterfalls while also having numerous hazardous stream crossing. Recreationists are advised to use caution when crossing rivers. Besides hiking and camping Turnagain Pass Trail is popular among mountain bikers, backcountry skiers, snowboarders, Nordic skiers, and fat-tire bikers.[3]

Gulch Creek ATV and Pedestrian Bridge Access

Gulch Creek All-Terrain Vehicle (ATV) and Pedestrian Bridge Access is located at MP 56.7 on the west side of the Seward Highway and marks the beginning of the historic mining trail further up Gulch Creek. This area provides a viewing area where visitors can see the whitewater rapids down below, including groups participating in guided tours. The parking area has room for a few vehicles but is often used by working placer miners who park their equipment in this location.

Raft Launch

This state-owned facility located on the west side of Seward Highway at MP 58.3 often referred to as East Fork Boat Launch or Six Mile Raft Launch is used by rafting guides. The USFS

[3] USFS Website. Iditarod National Historic Trail - Southern Trek. https://www.fs.usda.gov/chugach. Accessed 2023.

recommends recreationists to traverse the rivers in this area with caution due to the rough rapids.

Johnson Pass North Trailhead

Johnson Pass Trailhead located at MP 62.9 and is a 23-mile-long segment of the INHT popular with family backpackers and mountain bike users, with a gravel parking area that tends to reach capacity on the weekends. The trail is identified as an easy to moderate multi-use trail with gradual elevation gains and a few steep sections where snow can be found at higher elevations until mid-June. A public restroom can be found along with information signs that highlight points of interest, typical conditions, and a map of the area. These information signs are weathered and outdated, and overdue for upgrades.

The entire length of Johnson Pass Trail is closed to motorized vehicles from May 1 to November 30, while the North Trailhead to mile 3.6 (closest to the study area) is closed to motorized vehicles year-round. The trail is closed to pack/saddle stock from April 1 to June 30.[4]

Center Ridge Trail Head

This lot is located at MP 68.3 and provides access to a non-motorized "loop to nowhere". Like the Turnagain Pass motorized vehicle area, this lot has restrooms available on site that are often used as a makeshift rest area when the official rest area located at MP 56.3 is closed for the winter season. This increase from the intended use has led to maintenance issues due to the cost of providing pumping services.

Tincan Trailhead

Tincan Trailhead is not an official trailhead but has been used so frequently so access nearby ski terrain that this is how it is most often referred to as. It is located at MP 68.2 on the east side of Seward Highway and has been identified as a top priority for improvements by USFS. This trail reaches peak popularity during the months of February to March among skiers due to its flatter terrain and shorter approach while also being relatively safe from avalanche activity. The pullout that access Tincan fills up often and can cause significant safety issues for recreation users pulling in and out of the parking area have been identified due to the pullout being located on a horizontal and vertical curve, lane merge on the highway right at the pullout, limited sight distance, and high speeds on the Seward Highway.

[4] Chugach National Forest Website: Johnson Pass Trail South -INHT. https://www.fs.usda.gov/recarea/chugach/recreation/hiking/recarea/?recid=74185&actid=50. Accessed 2023.

Upper Ingram Trailhead

Upper Ingram Trailhead located at MP 72.5, is a 12-mile segment of the INHT and is often referred to by the public by Eddie's TH, in referenced to the former Girdwood mayor Eddie Genzwel who first popularized skiing in this area.. This location was originally built as a slow vehicle turnout by DOT&PF but has seen an increase in use with the popularity of winter recreation activities. Skiers looking to access Tincan Trailhead use Upper Ingram trail especially when parking at the Tincan pullout has reached capacity. The ski trail condition in the winter months is similar to the Tincan trail but is one mile further from the best ski area that is served by Tincan.

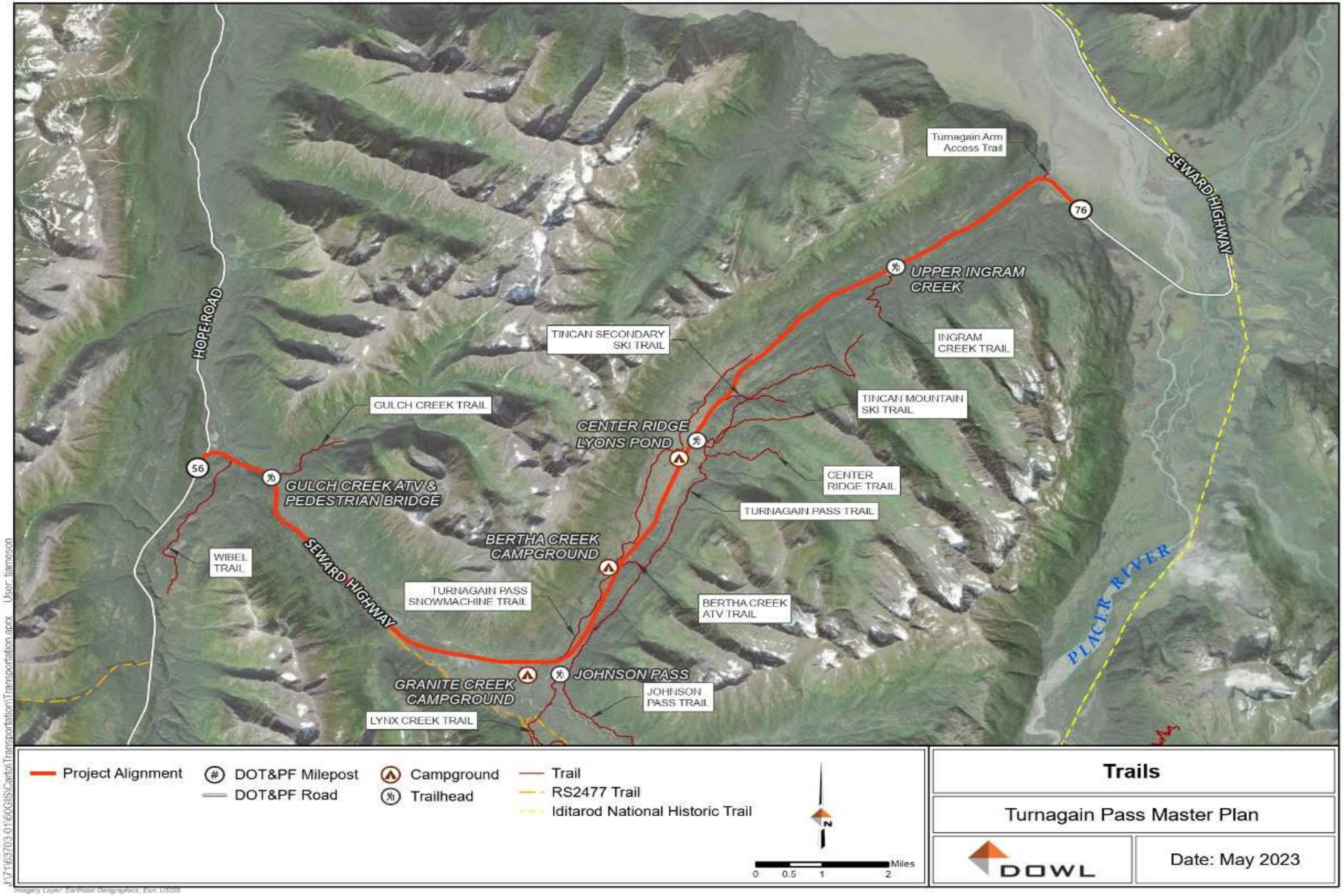


Figure 2-2 Existing Trails

2.3.2 Camping

The study area has two distinct USFS Campgrounds located at MP 65.4 and 68. Other camping opportunities exist along longer hiking trails or at dispersed campsites that do not require a fee to use. With limited enforcement within the corridor, unauthorized camping has become popular at roadside pullouts and parking lots within Turnagain Pass. Campsites are documented on Figure 2-2 along with existing parking and pullouts.

Granite Creek Campground

Granite Creek Campground is a small loop campground located at MP 63 of the Seward Highway. A fee is required between Memorial Day and Labor Day weekends, reservations are highly recommended for summer camping and can be made 180 days in advance. Unlike Bertha Creek Campground, Granite Creek Campground is closed during the months that it is not maintained, typically with a closed gate and snow berm in place to restrict access. The nightly fee for the 2022 season was $19.00, paid using a self-service user pay station at the entrance to the campground for any sites that are unreserved. When reserved, all fees are paid online at recreation.gov. There are 19 sites that are suitable for vehicle, small RV, trailer, or tent camping. Services include access to a hand driven water pump, dumpster, picnic tables, fire rings, bear lockers, and vault toilet facilities. Recreation access includes fishing, big game hunting, and proximity to Johnson Pass Trailhead.5

Bertha Creek Campground

Bertha Creek is a small loop campground located at MP 65.4 of the Seward Highway, which requires a fee between Memorial Day and Labor Day weekends with access to a hand driven water pump, dumpster, picnic tables, fire rings, bear lockers, and vault toilet facilities. The nightly fee for the 2022 season was $19.00, paid using a self-service user pay station at the entrance to the campground. During the off-season, no fee is required but services are typically unavailable. There are 12 sites that are suitable for vehicle, small RV, trailer, or tent camping. Recreation access includes fishing, mining, and boating.[5]

[5] Bertha Creek Campground Website. https://www.fs.usda.gov/recarea/chugach/recreation/camping-cabins/recarea/?recid=6600&actid=29. Accessed 2023.

3. Current Traffic Trends

3.1 Facility Characteristics

Seward Highway is classified as an Interstate Highway by DOT&PF. Through the 20-mile study area Seward Highway consists of cross-sections varying between two and four lanes, with varying lane and shoulder widths due to surrounding terrain. Seward Highway has a posted speed of 65 miles per hour (MPH) and is considered rolling terrain throughout the study area as the road progresses through the Chugach Mountains. The 20-mile stretch of Seward Highway is divided into segments where lane and capacity changes occur for ease of evaluation. The available facilities differ for the increasing MP number direction (North/East), and the decreasing direction (South/West) and therefore are reported separately in Tables 3 and 4.

Table 1 Ascending Roadway Segment Characteristics

Segment Name	MP		Highway Type	Lane Width (feet)	Shoulder Width (feet)	Posted Speed (MPH)	Terrain	Median
	Start	End						
A1	56.0	61.4	Two-Lane	12	6	65	Rolling	-
A2	61.4	63.3	Two-Lane	12	7	65	Rolling	-
A3	63.3	65.2	Two-Lane	12	6	65	Rolling	-
A4	65.2	67.7	Two-Lane	12.5	8	65	Rolling	-
A5	67.7	68.6	Multi-Lane	12.5	10	65	Rolling	Striped 18’
A6	68.6	69.2	Two-Lane	11.5	6	65	Rolling	-
A7	69.2	76.0	Two-Lane	12	6	65	Rolling	-

Table 2 Descending Roadway Segment Characteristics

Segment Name	MP		Highway Type	Lane Width (feet)	Shoulder Width (feet)	Posted Speed (MPH)	Terrain	Median
	Start	End						
D1	76.0	69.2	Two-Lane	12	6	65	Rolling	-
D2	69.2	68.6	Two-Lane	11.5	6	65	Rolling	-
D3	68.6	67.7	Multi-Lane	12.5	10	65	Rolling	Striped 18’
D4	67.7	65.2	Two-Lane	12.5	8	65	Rolling	-
D5	65.2	63.3	Two-Lane	12	6	65	Rolling	-
D6	63.3	61.4	Two-Lane	12	7	65	Rolling	-
D7	61.4	56.0	Two-Lane	12	6	65	Rolling	-

Figure 3-1 visualizes the ascending and descending segments and the corresponding facility characteristics described in Tables 3 and 4. From the information displayed varying shoulder widths may cause safety concerns for road users such as the inability to safely pullover for roadside emergencies or safely slow down for turnoffs to access recreation areas. The areas with narrower shoulder widths accompanied with high posted speed limits and rolling terrain serve as an obstacle for non-motorized recreational users in the area.

Additionally, maintenance of the Turnagain Pass corridor includes snow removal and storage challenges due to an average snow fall of up to 100 inches in the winter months[6]. Shoulder widths should be able to accommodate reasonable snow storage for the heavy precipitation common to this area.

[6] National Weather Service. Turnagain Pass Annual Snow Depth Plot. Accessed June 29, 2023. https://www.weather.gov/aprfc/Snow_Depth.

Figure 3-1 Ascending and Descending Roadway Segments Identified

3.2 Traffic Characteristics

Existing traffic data from DOT&PF short-term counting stations located on Seward Highway at Mileposts 65.5 and 75[7] is intermittent and required seasonal adjustments using nearby permanent counting stations to accurately reflect design volumes. The most recent daily counts were collected at milepost 65.5 from August 7th to 16th, 2021, and at milepost 75 from August 3rd to 9th, 2022. Operations analysis required the use of 30th highest hour design volumes, which was found by applying the K factor[8] estimated by DOT&PF to the seasonally adjusted[9] Average Annual Daily Traffic (AADT), measured in vehicles per day (VPD). The available count data indicates 60% of traffic travels in the peak direction, leading to a directional (D) factor of 0.60. For analysis, the count that is nearer to the analysis area will be applied to that section. These volumes can be seen below in Table 5.

Table 3 Traffic Volumes

Count Station MP	Year	August Average Count (Vehicles)	Seasonal Adjustment Ratio	AADT **(VPD)**	K Ratio	30th Highest Hour	D Ratio	30th Highest Hour Peak Direction
65.5	2021	10,967	0.57	6,240	0.239	1,491	0.60	895
75	2022	8,253	0.57	4,696	0.241	1,132	0.60	679

[7] Alaska Department of Transportation and Public Facilities, Alaska Traffic Data, https://alaskatrafficdata.drakewell.com/publicmultinodemap.asp. Accessed 2023.

[8] K-factor is defined as the proportion of AADT occurring in the 30th Highest Hour, sometimes referred to as K30 or Design Hour Factor.

[9] Seasonal Adjustment methodology has been noted here by applying the K factor estimated by DOT&PF from nearby permanent count stations. Seasonally adjusted volumes may differ from DOT&PF seasonally adjusted volumes published elsewhere.

3.3 Existing Traffic Needs

Existing needs for traffic were identified through capacity and safety analyses of the roadway segments. Needs were identified by taking available existing conditions data and comparing it to DOT&PF standards.

3.3.1 Segment Capacity

Segment capacity was evaluated by calculating the level-of-service (LOS) based on design hour volumes for the 30th highest hour. The analysis was performed following the methods in the Highway Capacity Manual 6th edition[10].

Single lane segments were analyzed using Two-Lane Highway methodology, which calculates average travel speed, percent time following, and percent free flow speed as performance measures to calculate the LOS for the segment. Two lane segments were analyzed using the Basic Freeway and Multilane Highway Segments methodology which uses mean travel speed and traffic density as performance measures to calculate the LOS. It was determined that the entire stretch of highway is classified as a Class 1 Highway, due to the expected high speeds and limited access roads onto Seward Highway.

According to the DOT&PF Highway Preconstruction Manual section 1000.1[11], LOS targets are to be set based on the 2011 AASHTO Green Book, Section 2.4.5[12]. The Green Book lays out a Design LOS for a Rural Rolling Highway target as a B. The LOS of each roadway segment are shown in Tables 6 and 7.

There are three two-lane highway segments that are not operating at the LOS targets laid out by DOT&PF. These are from MP 65.2- 67.7, and 68.6- 69.2 in the ascending milepost direction and from MP 67.7- 65.2 in the descending direction. These segments identified in (color) on Figure 3-2 do not provide passing lanes and should be studied to identify potential solutions to have these segments operate at a sufficient level of service.

[10] Transportation Research Board (2016), Highway Capacity Manual 6th Edition

[11] Department of Transportation and Public Facilities (2022), Alaska Highway Preconstruction Manual

[12] American Association of State Highway and Transportation Officials (2011), A Policy on Geometric Design of Highways and Streets

Table 4 Ascending Roadway Segment Operations

Segment Name	MP		Analysis Type	Level of Service
	Start	End		
A1	56.0	61.4	Two-Lane	C
A2	61.4	63.3	Two-Lane	A
A3	63.3	65.2	Two-Lane	A
A4	65.2	67.7	Two-Lane	D
A5	67.7	68.6	Multi-Lane	A
A6	68.6	69.2	Two-Lane	D
A7	69.2	76.0	Two-Lane	B

Table 5 Descending Roadway Segment Operations

Segment Name	MP		Analysis Type	Level of Service
	Start	End		
D1	76.0	69.2	Two-Lane	A
D2	69.2	68.6	Two-Lane	A
D3	68.6	67.7	Multi-Lane	A
D4	67.7	65.2	Two-Lane	E
D5	65.2	63.3	Two-Lane	A
D6	63.3	61.4	Two-Lane	A
D7	61.4	56.0	Two-Lane	A

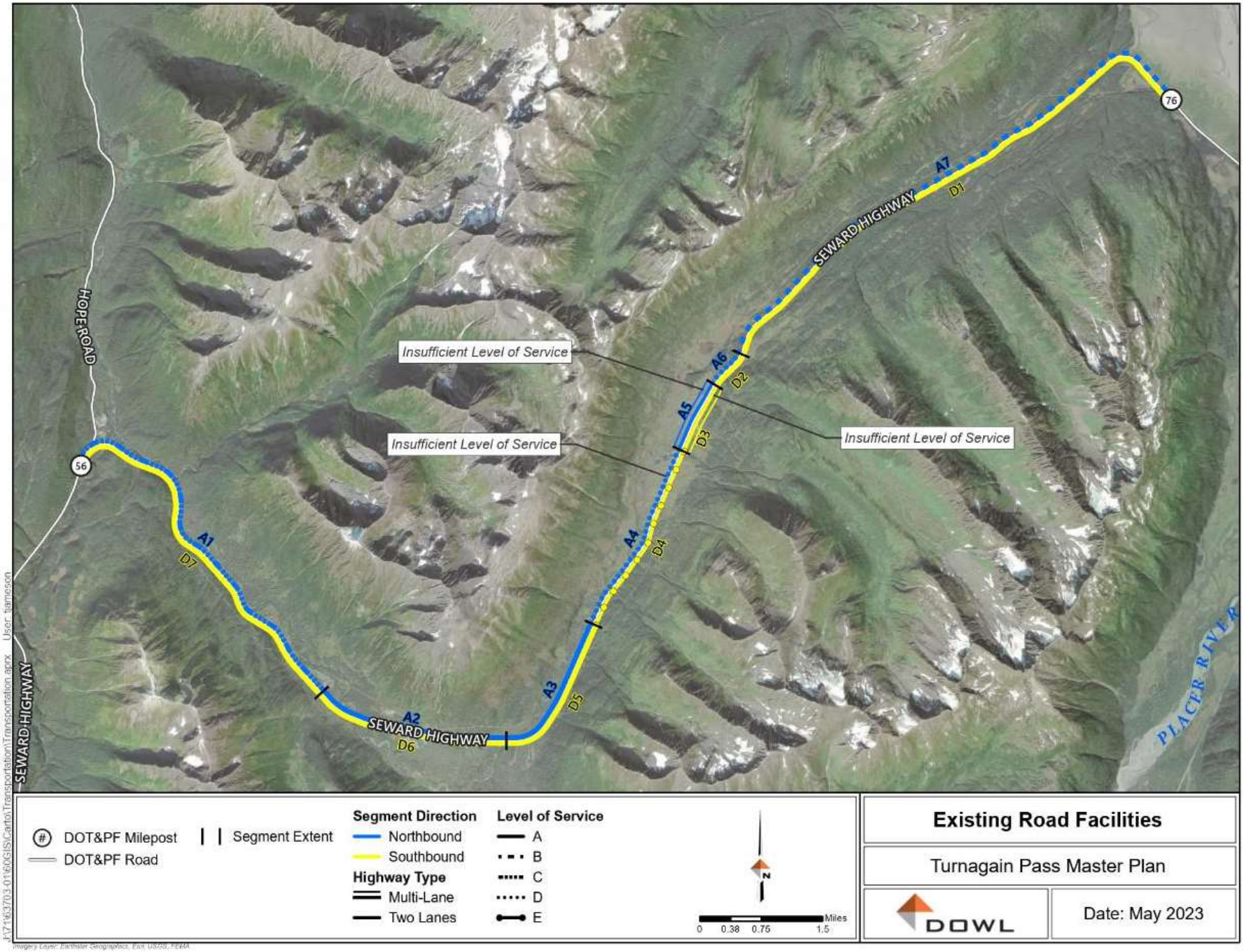


Figure 3-2 Ascending and Descending Roadway Segment Level of Service

3.3.2 Safety Analysis

Crash data from 2013-2021 was obtained from DOT&PF staff[13] to use to analyze existing safety conditions along the corridor. Calculated Crashes per Million Vehicle Miles Traveled (MVMT) were compared to DOT&PF statewide average segment accident rates from the 2017 Alaska Highway Safety Improvement Program Handbook[14]. The 2017 version of this handbook was used as it is the most recent version that includes the average crash rates.

The crash rate for the entire roadway network was determined to be a Rural Freeway, with a statewide average crash rate per MVMT of 1.1. Crash rate per segment can be seen below in Table 6. Segments for this analysis were split where the number of lanes change. The crash rates show that none of the roadway segments are over the statewide average rate of 1.1 crashes per million vehicle miles traveled. Therefore, there are no high-level safety needs on the corridor.

Table 6 Crash Rates Reflected from 2013 to 2021

Segment Name	MP		Highway Type	AADT (VPD)	Crashes	Fatal or Injury Crashes	Crashes per MVMT	Statewide Avg. Rate
	Start	End						
1	56.0	61.4	Two-Lane	6,240	31	13	0.30	1.1
2	61.4	63.3	Two-Lane	6,240	14	5	0.40	1.1
3	63.3	65.2	Two-Lane	6,240	13	4	0.30	1.1
4	65.2	67.7	Two-Lane	6,240	13	6	0.30	1.1
5	67.7	68.6	Multi-Lane	6,240	10	3	0.50	1.1
6	68.6	69.2	Two-Lane	6,240	9	5	0.70	1.1
7	69.2	76.0	Two-Lane	4,695	72	24	0.70	1.1

[13] Email from DOT&PF staff on April 10th, 2023

[14] Alaska Department of Transportation and Public Facilities (2017), Alaska Highway Safety Improvement Program Handbook

4. Existing Utility Infrastructure

Throughout the study area, the existing utility infrastructure is limited to overhead electric lines. Roadside electrical service withing the study area can be found at the Hope Cutoff (approximately MP 56.3). Utility level electrical service exists at approximately MP 55. Figure 3-1 displays the location of the overhead electric power lines within the study area.

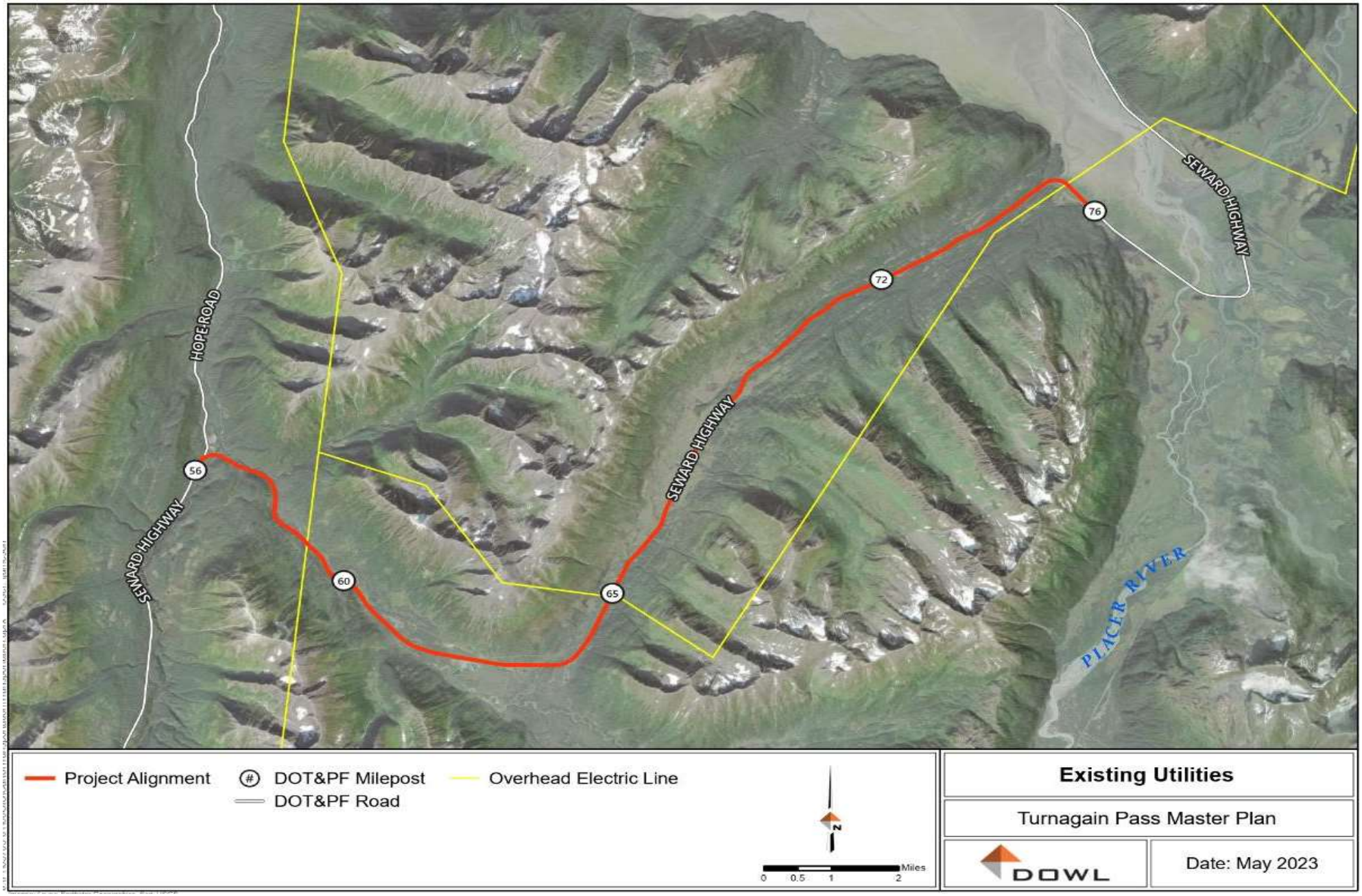


Figure 4-1 Existing Overhead Electric Line

5. Emergency Services & Safety Considerations

Local news sources state that the State Trooper Detachment A North based in Soldotna, Alaska, and the Girdwood Fire and Rescue often needs to respond outside of its dedicated service area to attend to crashes and emergencies in Kenai Peninsula Borough, sometimes as far south as MP 50[15]. Additional mutual aid locations for the Girdwood Fire and Rescue station include, Hope Fire Department, Cooper Landing Fire Department, Alaska Mountain Rescue Group, State of Alaska Division of Forestry, and the Alaska State Troopers[16].

According to the Girdwood Fire and Rescue website, roughly 95 percent of the land within their response area is public, irreplaceable, environmentally sensitive wilderness area. The areas they service are home to threatened, endangered, and sensitive species. Girdwood Fire & Rescue is also the first responders to any incident involving the transportation corridor that contains the Alaska Railroad, Seward Highway, and ENSTAR gas transmission pipeline[16].

There are four Fire Stations providing first responder services in the broader area surrounding the study area, though cell service is extremely limited and may impact the ability to call for help. Fire Stations are currently located Girdwood, Hope, Cooper Landing, and Moose Pass. In addition to response services, two emergency call boxes are located within the study area at MP 78.9 and MP 56 and an Alaska State Trooper Post is located near Cooper Landing.

[15] 2019 April 1. Cell coverage, distance limit Turnagain Pass 911 response. https://www.alaskasnewssource.com/content/news/Cell-coverage-distance-limit-Turnagain-Pass-911-response-507976861.html

[16] Girdwood Fire and Rescue https://www.girdwoodfire.com/ Accessed 2023

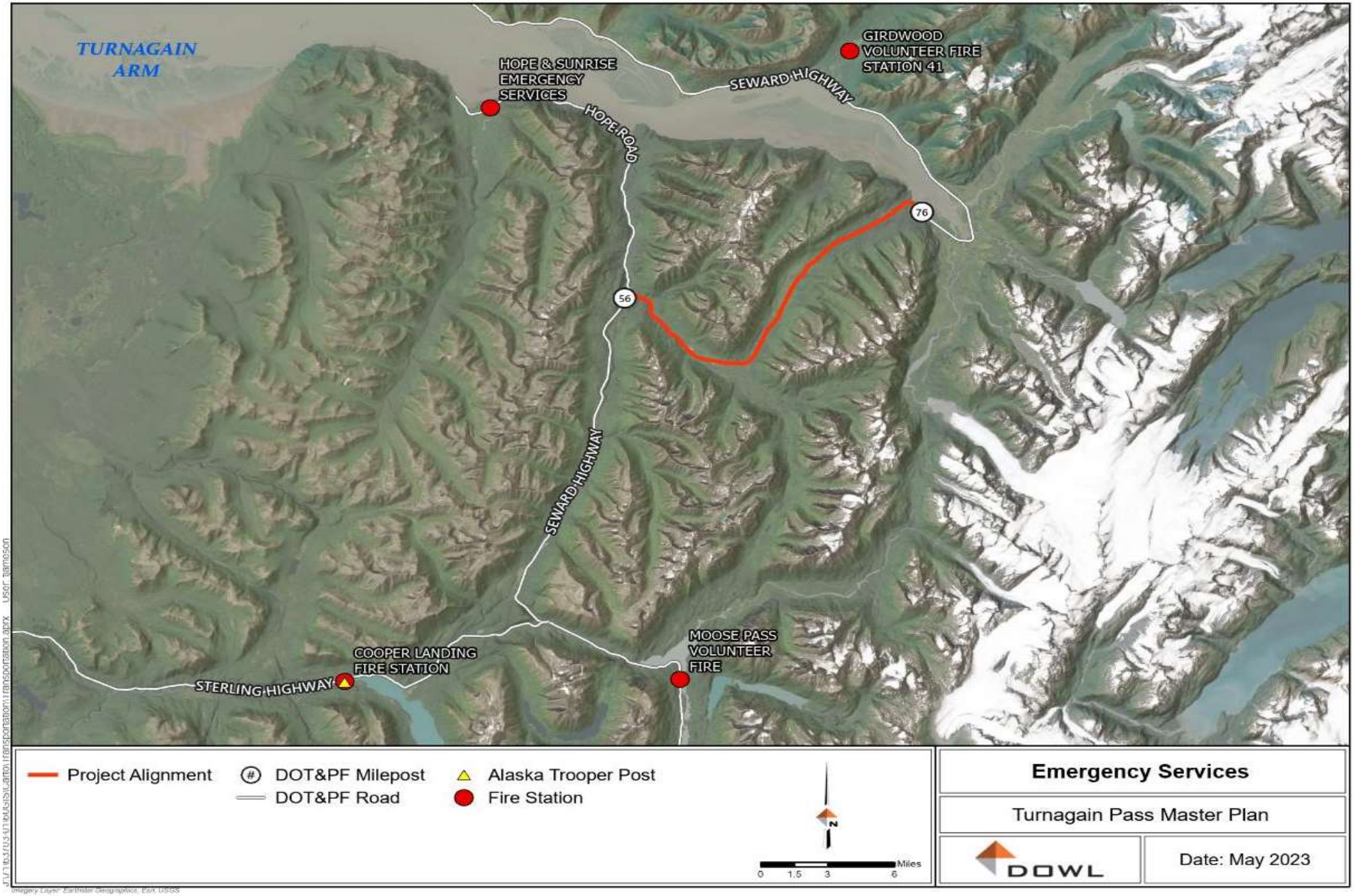


Figure 5-1 Existing Emergency Services Locations

6. Cultural Significance of the Area & Environmental Considerations

6.1 Cultural and Historical Significance

The National Historic Preservation Act (NHPA) of 1966, as amended, helps protect American archaeological sites, historic buildings, structures, objects, districts, and other cultural resources by requiring federal agencies to consider the impact of their actions on historic properties and provide the Advisory Council on Historic Preservation (ACHP) with an opportunity to comment on projects before implementation. The NHPA also established the National Register of Historic Places (NRHP), a list of historically significant properties in the United States. Section 106 of the NHPA requires federal agencies to consider the effects of their undertakings on historic properties, through consultation among the agency official and other interested parties, including state, tribal, and local governments, and the ACHP.

Property types, as defined by the NPS, are sites, buildings, structures, districts, and objects.[17] A "site" is defined as the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value. "Buildings" are defined as a construction created principally to shelter any form of human activity. The term "structure" is used to distinguish from buildings a functional construction made for purposes other than creating human shelter. Finally, a "district" possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.

In addition to protections afforded under the NHPA, properties listed, or determined eligible for listing on the NRHP are also protected by Section 4(f) of the United States Department of Transportation (USDOT) Act. Section 4(f) prohibits use of Section 4(f) properties unless all measures to minimize harm are incorporated and there is no other reasonable and prudent alternative to the 4(f) use.

Cultural resource data assembled in this memorandum will assist in the development of the TPMP and is derived from the Alaska Heritage Resources Survey (AHRS) database maintained by the ADNR, Office of History and Archaeology (OHA) and NPS's NRHP database.[18] Identified cultural resources are classified by property type and NRHP eligibility status. The AHRS is a restricted online database of cultural resources within the State of Alaska. It contains a mapping module that allows authorized users to upload shapefiles in point, line, or polygon geometries and run extract operations to identify previously

[17] National Park Service. 1997. National Register Bulletin #15 – How to Apply the National Register Criteria for Evaluation. Washington, D.C.: U.S. Department of the Interior.

[18] *Site-specific information for cultural resources described in this report is restricted and confidential under the provisions of the Archaeological Resources Protection Act and the National Historic Preservation Act. Sharing this information is limited to those with a legitimate need to know, such as appropriate personnel from agencies and authorized investigators. Do not disseminate.*

recorded cultural resource sites within any given area. AHRS data also includes property type and eligibility status for listing in the NRHP.

For the purposes of this overview, data pulled from the AHRS database was checked for accuracy and completeness and included verifying determinations of eligibility. Please note the AHRS database has been under construction since December 15, 2022 and is not currently active for users. Data reported to the OHA after that date is not accessible at this time and is not reflected in this overview. The AHRS database was queried using a December 6, 2022, static copy of the system obtained from OHA (ADNR, OHA 2022). Due to the varying reliability of data contained within the AHRS, it is highly likely that additional analysis, field surveys, and property location/condition verification would refine the number and classification of property types within the study area.

AHRS properties displayed on Figure 6-1 are mapped as they are recorded within the AHRS database, and no field verification or assessment of locational reliability was performed. AHRS properties are mapped according to their geometry as contained within the database (e.g., points, lines, polygons), and may not be an accurate reflection of the spatial extent of the property (e.g., a large historic site may be represented by a single point).

In total, five AHRS properties are recorded within or intersecting the extent of the study area. Of these five properties:

- Two have been determined **ELIGIBLE** (One Historic District, One Structure)
- One is **ELIGIBLE** as part of the INHT (One Structure)
- Two have been determined **NOT ELIGIBLE** for the NRHP (2 Structures)
- None are **LISTED** in the NRHP

The number of AHRS properties significantly increases directly adjacent to the 200-foot-wide study area and includes historic properties that have been determined eligible for listing in the NRHP.

The locational reliability of these properties varies, and is influenced by factors such as:

- Year when the property was identified and entered into the AHRS database
- The subsequent re-investigations or relocations of resources as part of cultural resource compliance activities or scholarly research collection and mapping methods used to record the location of the property (e.g., GPS unit vs. hard copy field map).

The condition of AHRS properties should be field verified, with particular attention paid to properties located within privately owned or managed lands, or properties recorded within intensive residential or commercial development. For instance, a property may no longer be extant, or it may be significantly altered from its original condition.

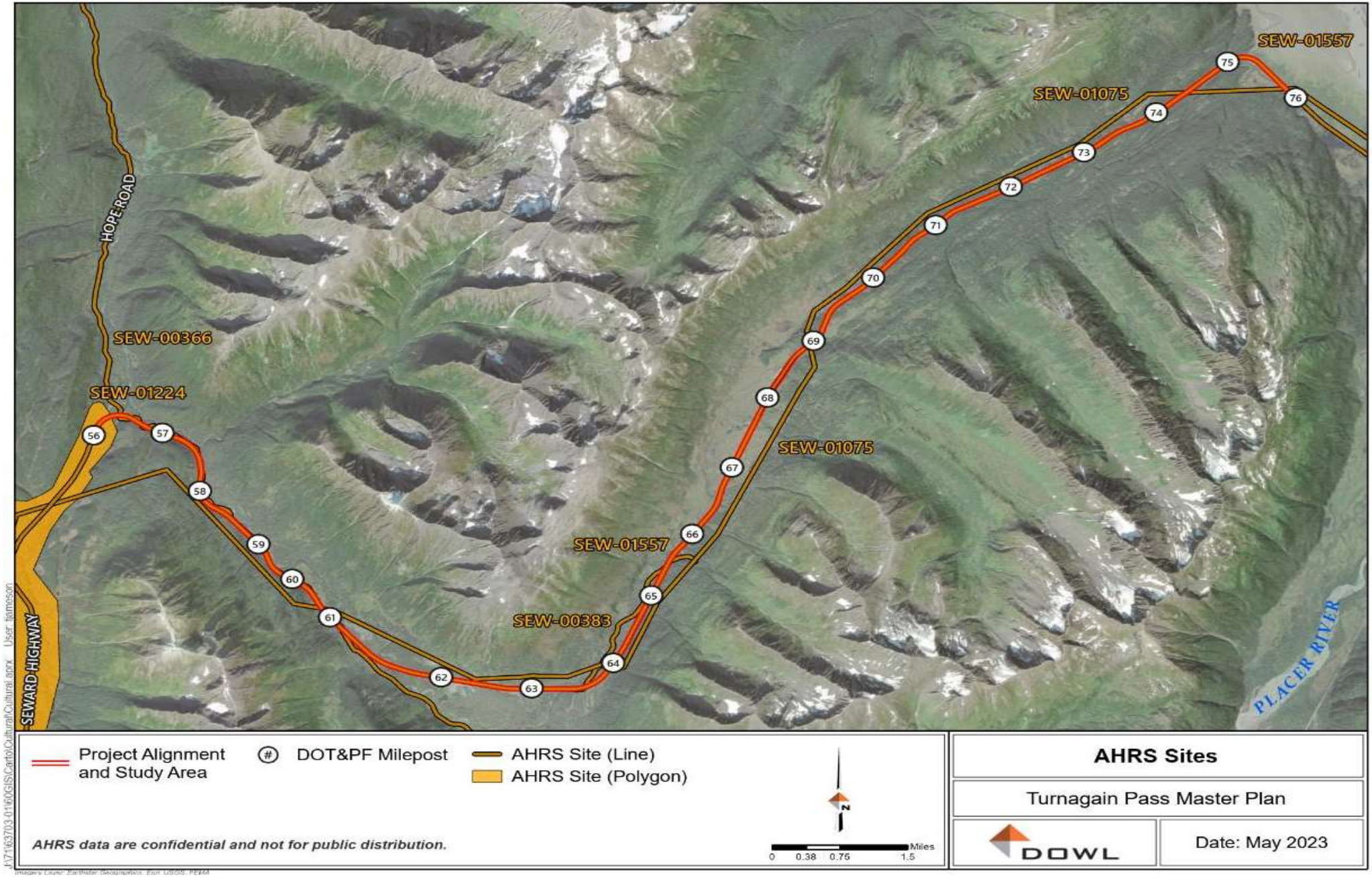


Figure 6-1 Existing AHRS Sites

Kenai Mountains-Turnagain Arm Cultural Heritage Area

The study area is in the Kenai Mountains-Turnagain Arm National Heritage Area (KMTA NHA). KMTA NHA encompasses a distinctive landscape of mountains, lakes, rivers, glaciers, and fjords. The area is depicted in Figure 6-2 and encompasses a north-south highway, rail, and trail corridors from Bird Creek to Seward and includes the communities of Girdwood, Portage, and Moose Pass. To the west, the area includes Cooper Landing, Sunrise, and Hope. To the east lie Portage, Whittier, and the wild waters of Prince William Sound. The unique landscape features prehistoric and historic land use that includes Dena'ina Athabascan heritage; exploration and gold mining; trails that include the Iditarod National Historic Trail; railroad, road, and highway construction; trapping and hunting; subsistence use; and outdoor recreation.

Cultural Heritage Areas are afforded the same level of protection and consideration under the NHPA, and federal agencies are required to account for potential effects to the resource through consultation and coordination detailed in Section 106.

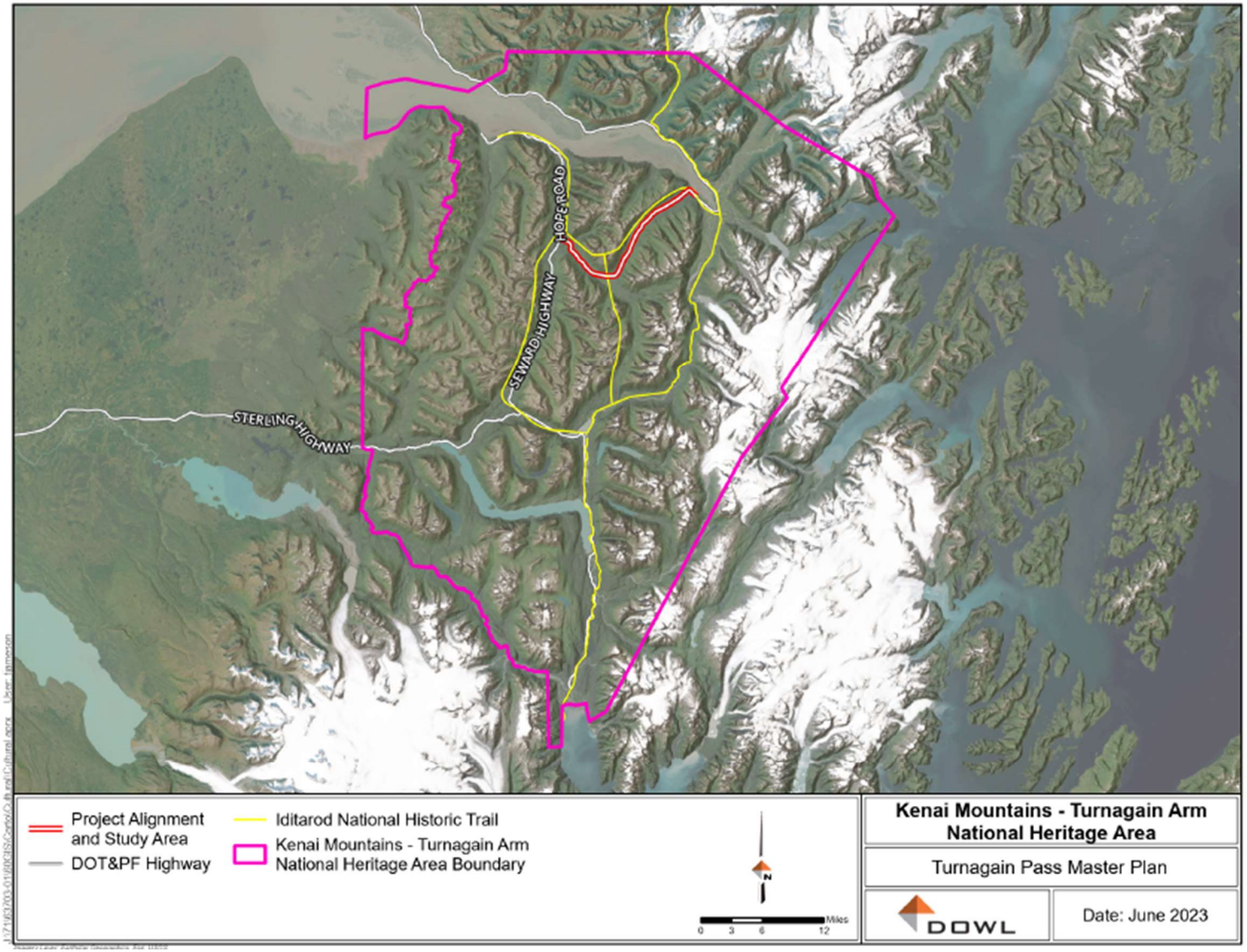


Figure 6-2 Turnagain Arm National Heritage Area – Kenai Mountains

6.2 Cultural Environmental Considerations

Existing environmental conditions within a study area (defined as 100 feet from centerline on either side of the Seward Highway milepost (MP) 57 to 76) have been evaluated. Resources are described to be consistent with FHWA National Environmental Policy Act (NEPA) guidelines. The following discusses resource categories present in the study area. Categories that are not present, such as minority or low-income communities, farmlands, and coastal resources are not discussed.

6.2.1 Parklands or Other Special Land Uses

As described in Section 2.0, recreational resources are rich in the area with four trailheads and three campgrounds owned and maintained by the USFS (Figure2-2). Detailed descriptions of the trails and campgrounds can be found in Section 2.0. It is reasonable to assume all the recreational resources would be protected under Section 4(f) of the USDOT Act because they are on USFS lands, however protection would need to be confirmed with the DOT&PF Statewide Environmental Office. Section 4(f) of the USDOT Act prohibits use of Section 4(f) properties unless all measures to minimize harm are incorporated and there is no other reasonable and prudent alternative to the 4(f) use.

Additionally, the Seward Highway right-of-way in the study area is surrounded by Chugach National Forest, which has received funding under the Land and Water Conservation Fund (LWCF) Act and is therefore subject to protection under Section 6(f) of the LWCF Act (Figure 6-3). The LWCF uses strong provisions to prevent conversion of 6(f) protected lands to non-recreational uses. Any conversion of land to non-recreational purposes requires consultation with the NPS, who administers the funding and ADNR, who manages the resources.

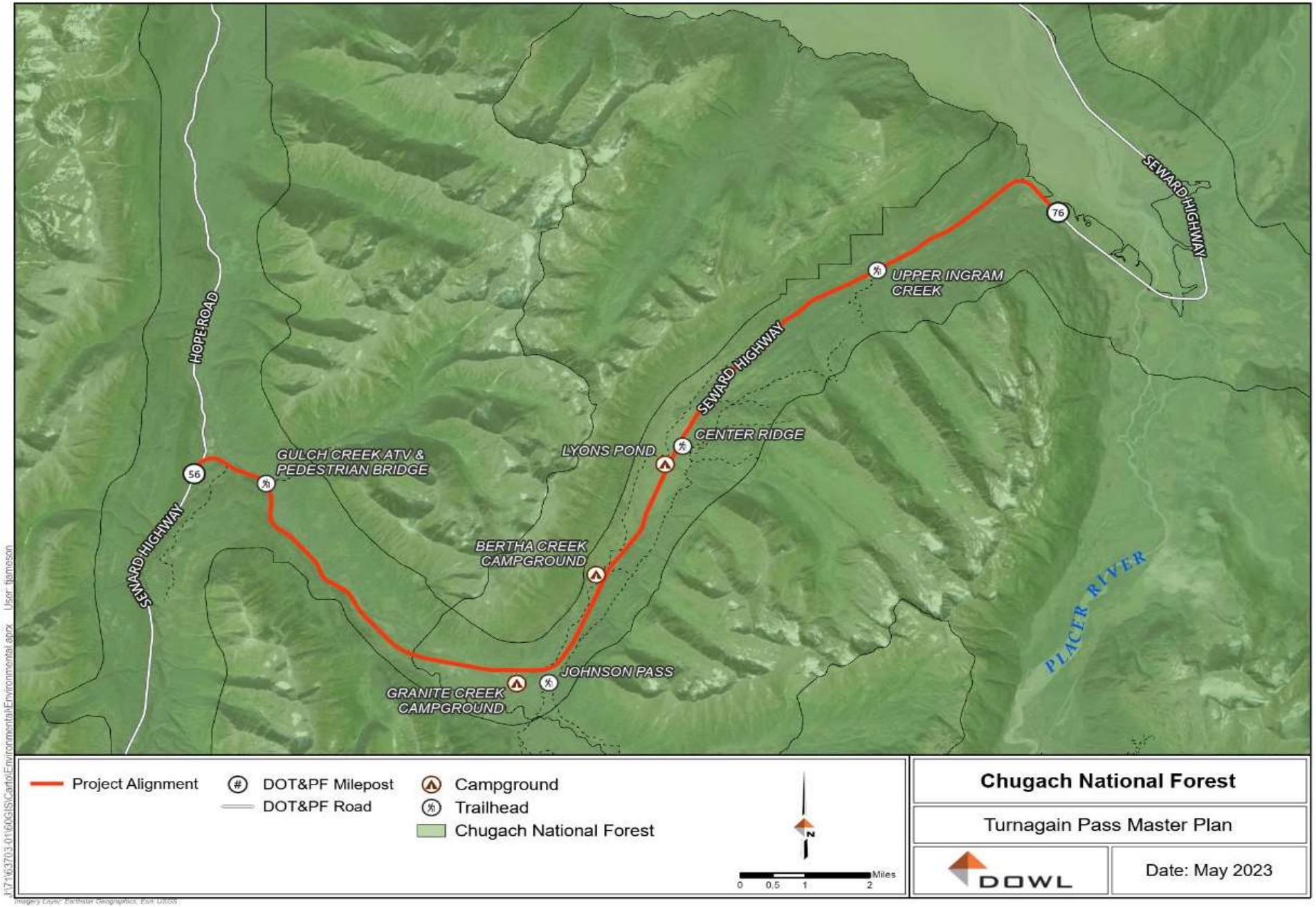


Figure 6-3 Map of Chugach National Forest

6.2.2 Contaminated Sites

Three ADEC contaminated sites are located within one mile of the study area (Figure 6-4). Two of the sites are active and one site has a status of cleanup complete, without institutional controls (Table 9):

- DOT&PF Silvertip Maintenance Station Class V Injection Well, is located approximately 0.75 miles from MP 57 and cleanup is underway.
- DOT&PF Silvertip Highway Maintenance Station (former location) is approximately 0.75 miles from MP 57. The site consists of a leaking underground storage tank (LUST) with outstanding data gaps concerning cleanup.
- DOT&PF Silvertip Station is approximately 250-feet from MP 60 and consists of a LUST that has since been remediated.

Coordination with ADEC would be required for any ground disturbing work within 1,500 feet of these sites

Table 7 ADEC Contaminated Sites Including Status and Location

Hazard ID No.	Site Name	Site Type	Status	Location
26579	DOT&PF Silvertip Maintenance Station Class V Injection Well	Injector Well	Active	Approx 0.75 miles from MP 57
23444	DOT&PF Silvertip Highway Maintenance Station (Former location)	LUST	Active	Approx 0.75 miles from MP 57
24703	DOT&PF Silvertip Station (Current location)	LUST	Cleanup Complete	250-feet from MP 60

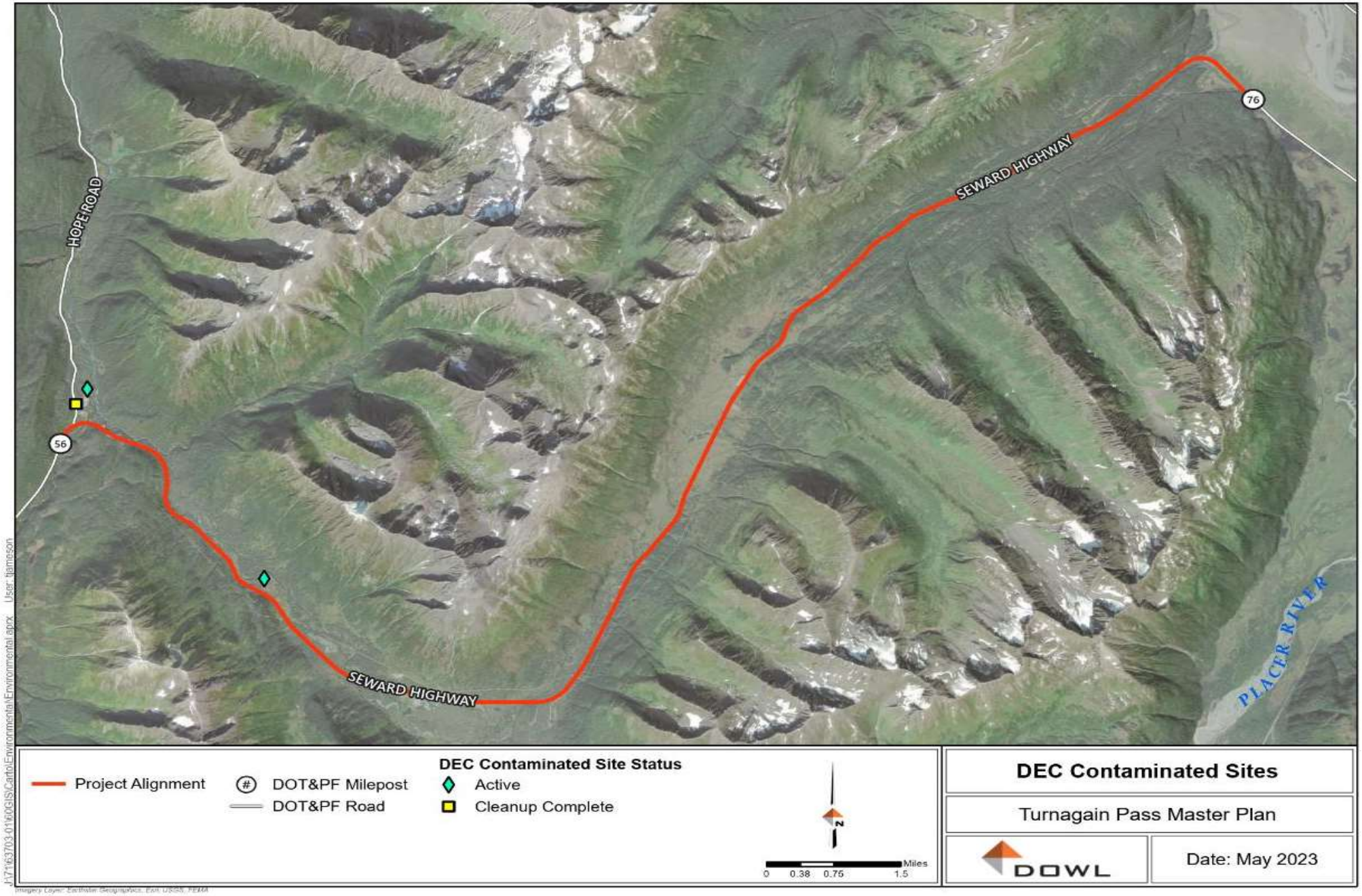


Figure 6-4 Map of ADEC Contaminated Sites

6.2.3 Climate Change and Air Quality

Cloudy conditions, short summers, and moderate to cold temperatures characterize the climate of this area. The average annual precipitation ranges from about 15 to 30 inches along the boundary with the Cook Inlet Lowlands to more than 100 inches in the highest mountains. Later summer and fall are generally the rainiest months. According to historical snow depth averages reported by the National Weather Service in Turnagain Pass, average snowfall can reach up to 100" in the winter months, while the average annual snowfall ranges from about 80 to 400 inches or more in the greater Cook Inlet Mountains region, which includes the Chugach Mountain surrounding Turnagain Pass[19],[20]. The average frost-free period is about 60 to 80 days. At higher elevations, freezing temperatures can occur during every month.

The Clean Air Act (CAA) administered by the Environmental Protection Agency (EPA) regulates greenhouse gas (GHG) emissions from surface transportation vehicles and stationary power generation sources. Six GHGs are regulated under the CAA, they include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), HFCs, perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). CO2 makes up most on-ground surface transportation emissions resulting from the road. The study area has several local wetlands which serve as a carbon sink where carbon GHG is stored and prevented entering the atmosphere. A Climate Change / GHG analysis may be warranted for any substantial changes to roadway capacity that would increase vehicular travel in the corridor. Conversely transportation improvements that mitigate congestion would be considered beneficial net carbon emissions reduction.

Council on Environmental Quality Climate Change Guidelines (2023) require during a NEPA evaluation an assessment of any development's resiliency to impacts from climate change such as wildfires, increased flooding, melting permafrost, increased storm severity, etc. Projected impacts of climate change for Southcentral Alaska include increased temperatures leading to milder winters, increased rain over the winter, and decreased snowpack. Precipitation is expected to increase in the form of rain, however higher temperatures would increase evapotranspiration and conditions are expected to be overall drier. Infrastructure proposals would need to consider warmer, drier conditions for climate change resiliency.

The EPA sets air quality standards for six pollutants known to impact human health. The study area currently meets all these standards. Turnagain Pass is not listed as a non-attainment area according to the EPA designated non-attainment areas for Clean Air Act's National Ambient Air Quality Standards.

[19] National Weather Service. Turnagain Pass Annual Snow Depth Plot. Accessed June 29, 2023. https://www.weather.gov/aprfc/Snow_Depth.

[20] United State Department of Agriculture, Natural Resources Conservation Service. Land Resource Regions and Major Land Resource Areas of Alaska. October 2004. Access June 29, 2023. http://www.ak.nrcs.usda.gov/technical/lrr.html

6.2.4 Waterbodies, Floodplains, and Wetlands

Numerous drainages flow into Turnagain Pass from adjacent mountains. The streams largely flow into Ingram Creek, Granite Creek, and East Fork Sixmile Creek. The existing Seward Highway from MP 57 to 76 has 31 stream crossings. The Kenai Peninsula Borough participates in the National Flood Insurance Program (NFIP); however, the study area has not been mapped by the Federal Emergency Management Agency (FEMA). Any proposed projects would need a Hydraulic and Hydrologic analysis to understand flood conveyances and base flood elevations. If floodplains are present, local floodplain management regulations would apply, however impacts to NFIP-protected properties is unlikely due to the remote nature of the study area and lack of residences.

The study area traverses from the coastline into the mountains and hosts 16.3 acres of several different wetland types (Table 10). According to National Wetland Inventory (NWI) mapping, estuarine and marine wetlands and deepwater are present near Turnagain Arm from MP 75 to 76. Freshwater emergent, freshwater pond, freshwater forested/shrub, and riverine wetlands are located throughout the project corridor. Estuarine and marine wetlands, and riverine wetlands account for the most acreage at 9.7 acres total, followed by freshwater emergent and freshwater forested/shrub consisting of 5.9 acres total. Due to the coarse nature of NWI mapping, a localized wetland delineation would likely be required to determine impacts.

Table 8 Wetlands and Acreage within Study Area

Wetland Type	Acreage
Estuarine and Marine Wetland	5.6
Estuarine and Marine Deepwater	0.1
Freshwater Emergent Wetland	2.3
Freshwater Forested/Shrub Wetland	3.6
Freshwater Pond	0.6
Riverine	4.1
Total	**16.3**

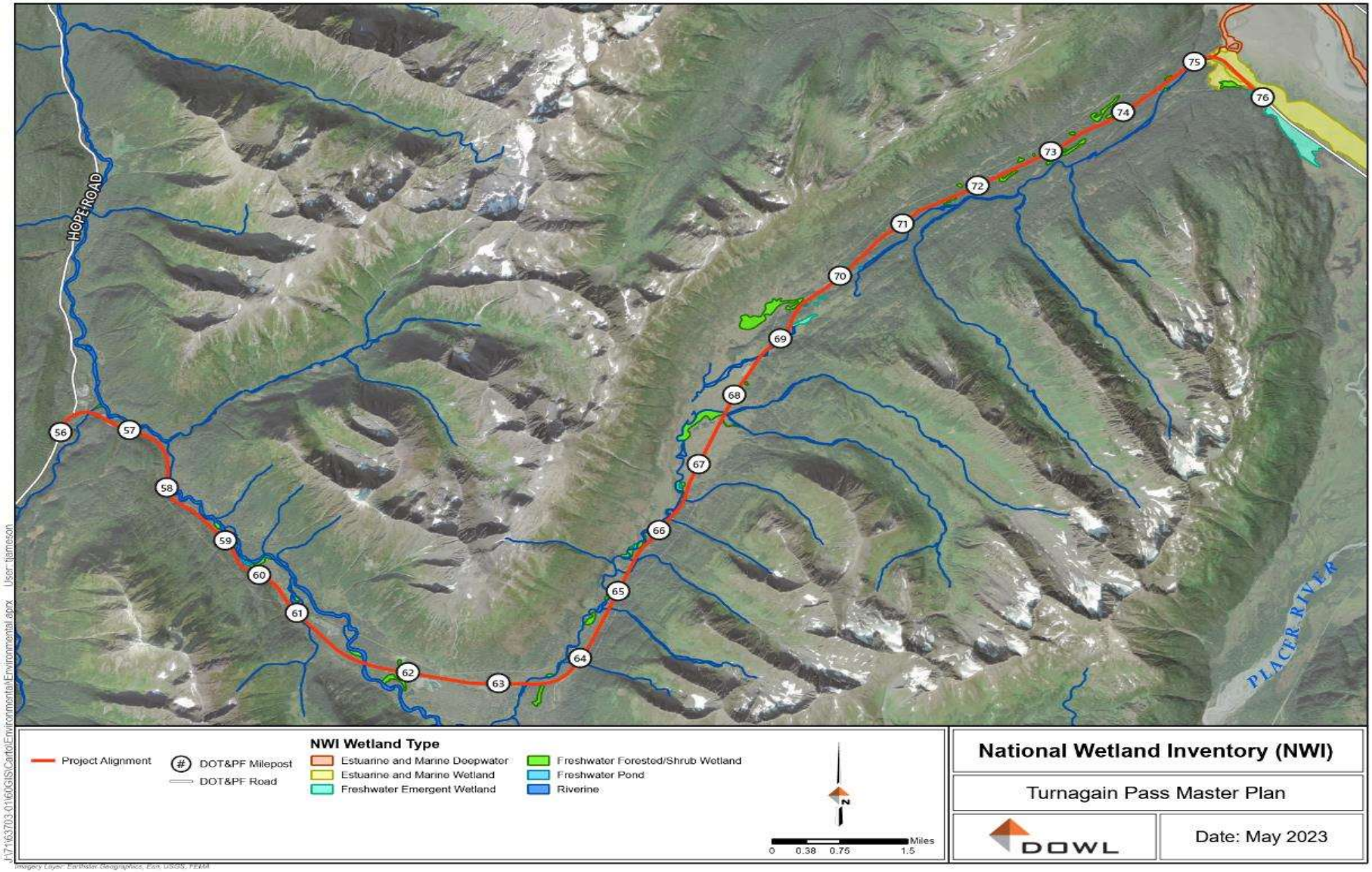


Figure 6-5 National Wetlands Inventory and Locations within Study Area

6.2.5 Threatened and Endangered Species

Federally threatened or endangered species present near the study area include the endangered Cook Inlet Distinct Population Segment (DPS) beluga whale (Delphinapterus leucas)[21]. The study area overlaps and is adjacent Critical Habitat from approximately MP 75 to 76 (Figure 6-6). The Cook Inlet beluga whale is known to follow feed on eulachon and salmon in Turnagain Arm; coho salmon are documented in Ingram Creek, crossed by the study area, and eulachon may be present. Consultation with National Oceanic and Atmospheric Administration (NOAA) Fisheries is required when the actions may affect Marine Mammal Protection Act (MMPA) protected or Endangered Species Act (ESA)-listed species or their designated critical habitat. Consultation would likely result in measures to minimize construction noise impacts to Cook Inlet DPS beluga whale and direct and indirect impacts to the critical habitat.

[21]National Oceanic and Atmospheric Administration. Fisheries Species Directory. https://www.fisheries.noaa.gov/species-directory/threatened-endangered. Accessed 2023.

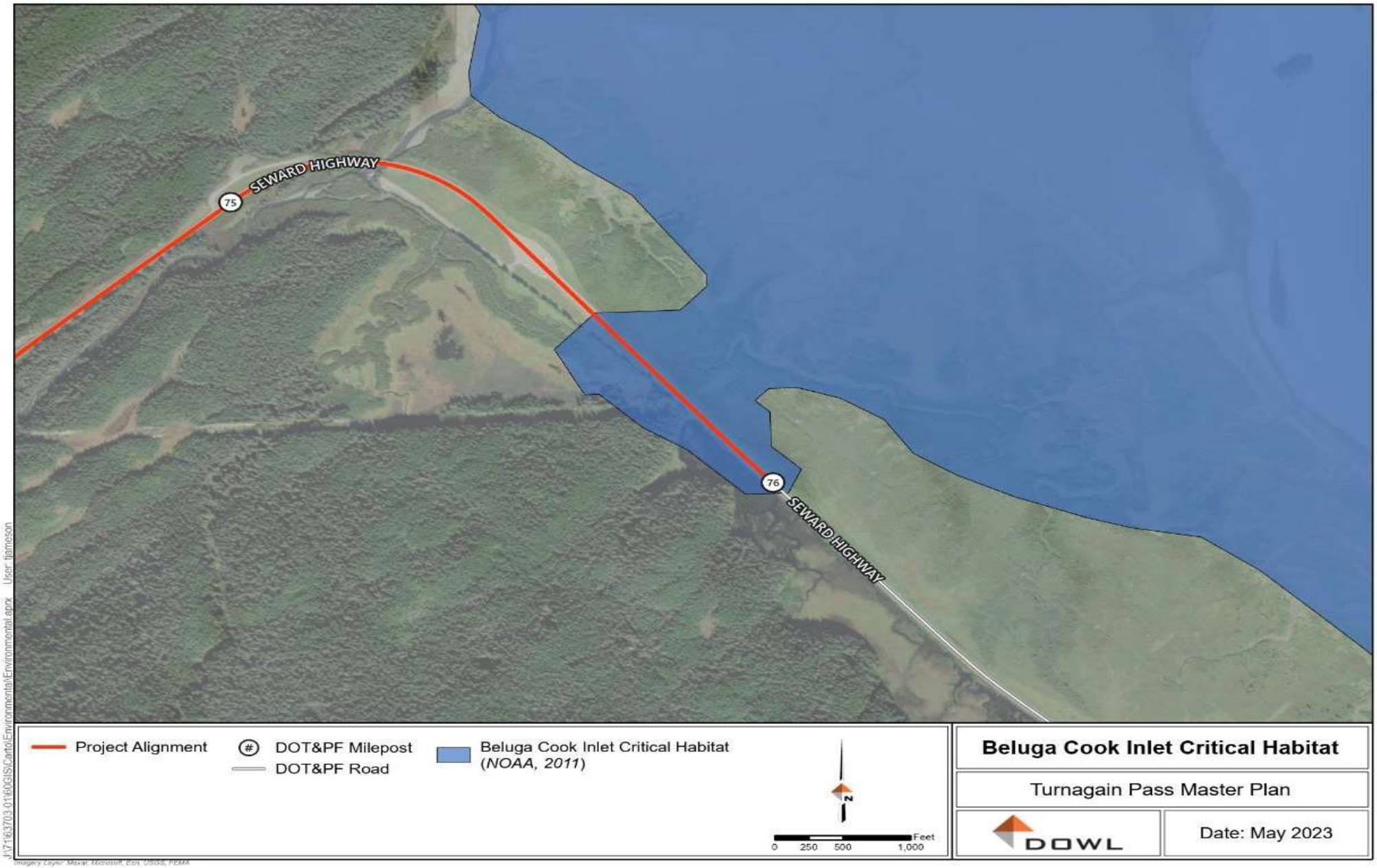


Figure 6-6 Location of Cook Inlet Beluga Critical Habitat in Relation to Study Area

6.2.6 Fish and Wildlife

Fish

As noted above, the Seward Highway crosses streams 31 times, including multiple crossings of the same stream. Resident fish are very common in streams in the area and include Alaska brook lamprey, three-spine stickleback, ninespine stickleback, slimy sculpin, and Dolly Varden trout. In addition to resident fish, the area is also habitat to all five species of salmon. The current roadway crosses anadromous streams 11 times, including named streams Granite Creek, Canyon Creek, Silvertip Creek, East Fork Sixmile Creek, and Ingram Creek. All the current anadromous stream crossings are rated by Alaska Department of Fish and Game (ADF&G) to have culverts that are assumed inadequate or may be inadequate for fish passage. Alaska Statute 16.05.871 requires approval from ADF&G before constructing within or across anadromous streams, and Statute 16.05.841 requires approval for construction within or across resident fish streams. Additionally, the Kenai Peninsula Borough's Habitat Protection District requires a conditional use permit for any disturbance within 50-feet of an anadromous stream.

Table 9 Anadromous Streams Crossed by Study Area and the Associated Species

Anadromous Waters Catalog (AWC) Code	Stream Name	Species
247-60-10170-2030	Canyon Creek	Chinook, Coho Salmon
247-60-10170-2029-3026	Silvertip Creek	Chinook, Coho Salmon
247-60-10170-2029	East Fork Sixmile Creek	Chinook, Coho, Pink, Sockeye Salmon
247-60-10170-2029-3041	Granite Creek	Coho Salmon
247-60-10190	Ingram Creek	Dolly Varden & Chum, Coho, Pink, Sockeye Salmon

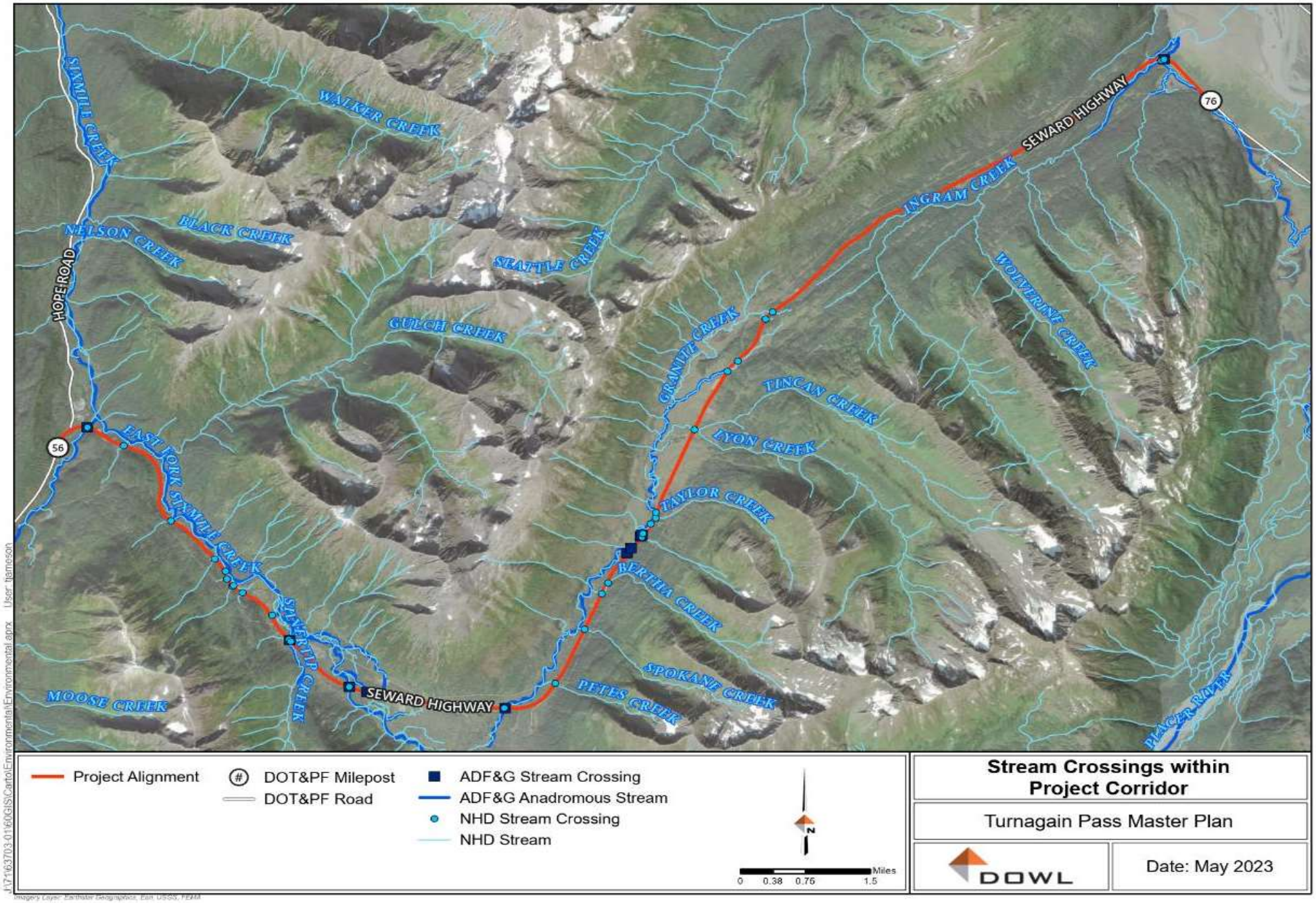


Figure 6-7 Map of NHD and ADF&G Anadromous Streams within Study Area

Birds

Migratory birds in the study area include Bald and Golden eagles (Haliaeetus leucocephalus and Aquila chrysaetos), common loon and red-breasted merganser (gavia immer and Mergus serrator), and two birds of conservation concern, the Olive-sided flycatcher, and Rufous Hummingbird (Contopus cooperi and selasphorus rufus). Migratory Birds are protected by the Migratory Bird Treaty Act and consultation with U.S. Fish and Wildlife Service (USFWS) would be required before disturbing habitat during the bird window for the region May 1 to July 15. Bald and Golden eagles are protected under the Bald and Golden Eagle Protection Act and consultation with USFWS would be required for any activities that may disturb eagles or take nests. If active eagle nests are found within 660 feet of the study area (primary and secondary protection zones), the DOT&PF, in conjunction with the United States Fish and Wildlife Service, will determine appropriate actions. Appropriate actions could include: 1) restricting certain construction activities during sensitive nesting time periods; or 2) monitoring the nest during construction. An eagle nest survey would likely be needed to ensure compliance with USFWS regulations.

Other Wildlife

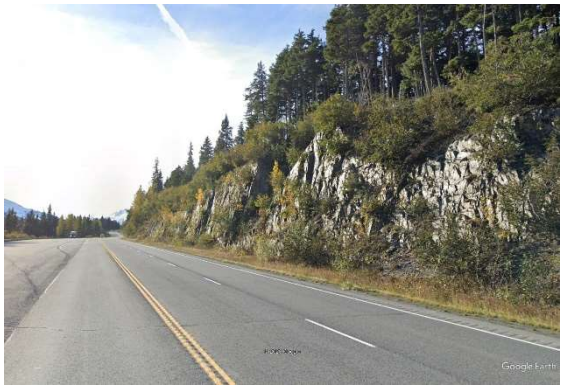
Turnagain Pass is located in Game Management Unit 7, managed by ADF&G. The management unit is habitat for brown and black bear, caribou, Dall sheep, mountain goat, moose, and several furbearers such as beaver, wolf, and wolverine. Much of the wildlife listed above are found at higher elevations in the mountain range, however moose, beaver, and black bear may be found at lower elevations. Because the Seward Highway corridor has existed through the wildlife habitat since approximately 1951, improvements to the existing corridor are not expected to fragment habitat or create a new bisection of a wildlife migration corridor.

7. Operations & Maintenance

Turnagain Pass is maintained by DOT&PF Maintenance and Operations (M&O) centers within the DOT&PF Central Region. MP 56 to 75.5 is maintained by Peninsula District's Silvertip Station and the remining half mile from MP 75.5 to 76 is maintained by Anchorage District's Girdwood Station.

Current Maintenance Staffing[22]

The pool of available labor for the Silvertip station is very limited and draws primarily from the small communities of Hope and Girdwood with occasional participation from Crown Point and Cooper Landing to the south, reflecting significant staffing problems at the Silvertip Maintenance Station. For example, most of the winter of 2022/23 saw only two fulltime regular staff at the station.



Winter Maintenance[22]

The Seward Highway throughout the study area experiences heavy snowfall which frequently arrives in back-to-back storms. As snow is plowed from the highway, it accumulates on the limited shoulders and in the shallow ditches on each side of the road. Roadway travelers will often experience a narrowing of the road until snow can be removed. This action usually involves pulling the snow into remaining lane space and then blowing away from the road. The M&O staff would see considerable advantage to widening shoulders and ditches to provide more snow storage and a space to "pull" the snow that is not within driving lanes or existing parking lots and pullouts. Parts of the corridor (MP 69-76) are bounded on the west side by rock walls or cliffs that prevent

[22] 2023 April 18. Interview with Sean Montgomery, DOT&PF Peninsula District M&O Superintendent.

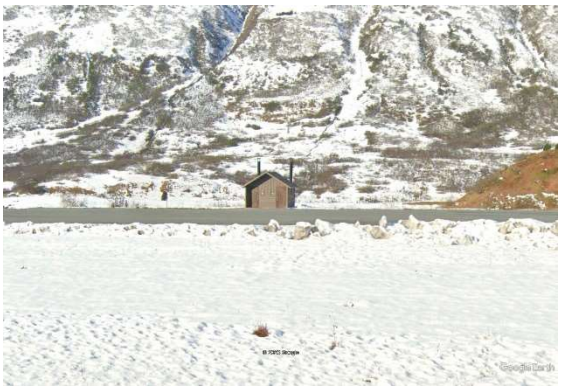
snow blowing actions. Removing or cutting this rock back will significantly improve M&O snow removal operations.

Drainage / Spring Runoff[23]

DOT&PF M&O staff view drainage along much of the corridor as insufficient to accommodate spring thaw, which results in peak water runoff. This is leading to premature deterioration of pavement, frost heaves, and the need for pumping water to prevent extreme washouts.

Roadside Assets[23]

Roadside assets such as signs, guardrails, and callboxes are easily lost in snow berms along much of the study area. M&O has requested that alternate means of mounting (higher) or marking these devices be explored, such as taller markers or in road makers. GPS is a consideration.



Avalanche Areas

Active avalanche areas are known to exist within the study area. Active shooting/control of avalanches has occurred at the summit lake site just outside of the study area in recent years at MP 46.

Rest Areas

Two official DOT&PF rest areas are located at approximately MP 56.5. These rest areas are maintained by DOT&PF throughout the summer months by contract and closed for winter months. Pullouts remain low priority for road maintenance in comparison to the roadway, which serves heavy freight traffic between Anchorage and the Kenai Peninsula.[23]

[23] 2023 April 18. Interview with Sean Montgomery, DOT&PF Peninsula District M&O Superintendent.

8. Fees, Permits & Revenue

User Fees

Turnagain Pass has two campground locations that have daily fees for usage. Bertha Creek Campground requires a fee to be paid per night during the peak recreation season.

Granite Creek Campground also requires a fee to be paid per night during the peak recreation season, but visitors can reserve a campsite up to 180 days in advance and provide payment online where they are charged the site fee as well as a service fee.

USFS Permits & Interagency Passes

Permits issued by the USFS to include outfitter guide, non-commercial use, recreation event, and commercial filming and photography permits. Interagency passes and permits are available for purchase at Chugach National Forest offices located in Anchorage, Girdwood, Seward, Cordova, Begich and Boggs Visitor Centers as well as online. These passes are honored nationally at all Forest Service, National Park Service, Bureau of Land Management, Bureau of Reclamation and US Fish and Wildlife Service sites charging entrance or amenity fees[24]. Currently none of the recreation sites within the study area require entrance or standard amenity fees that would be included for a user using an interagency pass.

9. Next Steps & Recommendations

The TPMP existing conditions desktop analysis and 2022 Site Visit found the study area serving variety of travel and recreational uses, rich in environmental and cultural resources, some safety-related concerns, and maintenance challenges that continue to increase due to the area's remote location, increased recreational use, expired maintenance agreements, and lack of agency M&O staff availability. The review also found abundant potential to improve access to the recreational areas and to provide better cultural and environmental resource awareness to year-round users.

As this study moves toward the demand management analysis and master planning phase, the following topic areas provide next steps to discover both opportunities for improvements and solutions to current challenges observed in the study area during the demand analysis and stakeholder and public engagement phases of the project.

[24] https://www.fs.usda.gov/main/chugach/passes-permits/recreation Accessed 2023

Motorized Winter & Summer Recreation

The Turnagain Pass winter season and its associated snow and ice conditions provides protection to the environmental resources described in this study area, which allows free range to recreational activities requiring open space and flexible routes. Snowmachining is the currently observed winter activity which produce the highest number of users overall due to the steep and challenging terrain in this area. Due to current demand for access, parking, and RV or trailer camping to support users, opportunities for additional and improved facilities for snowmachine enthusiasts should be explored during stakeholder interviews.

Next Steps. *Identify current activities and opportunities for improved facilities from motorized within the context of safe access to Turnagain Pass.*

Summer & Winter Non-Motorized Recreation

Observed non-motorized winter users are backcountry skiers and paragliders. Although these users' access needs differ from that of non-motorized summer recreators, the infrastructure needed is similar to summer season mountain bicyclists, road cyclists, horseback riders, backpackers, and hikers. Adequate parking space, safe access, and basic facilities (i.e., water, toilets, signage) could provide dual-use facilities throughout the year. Potential new or improved access to the Chugach Forest for non-motorized summer activities is in the TPMP study area should be discussed with the public and stakeholder user groups.

Next Steps. *Identify what summer activities are currently taking place and engage the community's response to potential new infrastructure to support additional summer recreational activities and access such as single-track mountain biking, primitive camping/backpacking, groomed trails, and corridor-adjacent multiuse pathways.*

Cultural/Environmental Education & Recreation

The project area is within the Kenai Mountains-Turnagain Arm National Historic Area, a culturally rich and environmentally diverse area. When expanding recreational access in this area, sensitivity to the cultural and environmental resources should be addressed in any physical improvements or additions to the recreational facilities. Depending on the specific location, recreational activity, and season, there may be opportunities for dual use of both the land and educational tourism in the study area.

Next Steps. *Look for areas that can be developed as dual education and recreation areas while maintaining an appropriate sensitivity to cultural and environmental context.*

Emergency Services Access

As this plan seeks to improve access and potentially increase recreation use for the area, this is an opportunity to gather additional information from the area emergency responders during

stakeholder interviews to help identify the most useful location of additional emergency response facilities.

Next Steps. *Work with local emergency responders to confirm current needs, recommended improvements, and solutions to improve emergency response and preparedness for users.*

Maintenance & Operations

DOT&PF M&O staff identified potential areas of capital improvements and issues with maintenance that could improve both maintenance activities and the safe operation of the Seward Highway roadway corridor.

Expansion of ditches and replacing failing culverts would help preserve existing pavement by directing water away from roadway facilities. Redirection of stormwater/thaw runoff reduces frost heaves and expanding ditches increases snow storage, both of which are seasonal challenges along the corridor. Major frost heaves are known to exists at MP 52/53 and MP 73/74.

Pullout expansion, particularly at the pullout located on the east side of the road at approximately MP 69.5, would help reduce the hazard of roadside parking on narrow shoulders along the highway. The MP 69.5 pullout is at times over-capacity, causing overflow vehicles to park along the highway. Reduced shoulders can cause these vehicles to take part of adjacent through lanes, a hazard to through traffic and maintenance operations. As outlined in Section 7, pullouts and rest areas are some of the lowest priorities and are not addressed as often as needed due to staffing shortages with M&O and the remote location of facilities along the Turnagain Pass corridor. Agreements for DOT&PF to maintain these pullouts have expired, and it would be beneficial to users to create an updated maintenance arrangement with the appropriate agencies.

Next Steps. *Identify areas for ditch and shoulder expansion, enlarge and replace failing cross culverts, and expand pullouts to match current and anticipated demand. Address staffing challenges for winter maintenance.*

Funding Sources and Facility Management & Operations

Increasing maintenance needs, access to life-saving emergency services, and capital projects to add or improve existing access to recreation opportunities along the corridor will likely require a dedicated source of funding and partnerships with agencies that can build and manage any infrastructure along the corridor.

Next Steps. *Identify current funding/fee/revenue sources and use. Identify potential, sustainable revenue sources for improvements and on-going maintenance based on current and forecasted demand.*

Key Partnerships

Turnagain Pass has the potential to be a well-used area for recreationists of all ages and abilities. Partnerships between state and federal agencies, as well as the current and future user groups will be key to building and maintaining world-class recreational access to one of Alaska's most beautiful corridors. These partnerships have the potential to help state and federal agencies balance desired recreational opportunities, manage demand, and respond to concerns and ideas of the current and potential users.

In addition, agencies responsible for maintenance of Turnagain Pass facilities have opportunities to work together to better serve the demand of the current and potential users through updated maintenance agreements, addressing staffing challenges, and sustainable funding for M&O activities.

Next Steps. *Build defined partnerships across state and federal agencies to regularly engage Turnagain Pass users to assist in serving the public. Explore opportunities for agency partnerships to best meet maintenance and associated staffing demands.*

APPENDIX 1:
TURNAGAIN PASS SITE VISIT REPORT

FHWA Office of Federal Lands Highway

Turnagain Pass Corridor Master Plan

Site Visit Summary

Turnagain Pass, near Granite and Lyon Creek

Date: August 12th, 2022

To: Project Management Team

From: Cole Grisham, AICP

FEDERAL LANDS HIGHWAY

Table of Contents

Introduction

This report summarizes the findings from the August 12th, 2022, site visit for the Turnagain Pass Corridor Master Plan. The report includes an overview of the project location below followed by sections focusing on the specific site visit stops. We close with the summary themes from the site visit and how this report informs the project's next steps.

Project Area

The project area is located on the Seward Highway (Alaska Route 1) south of Anchorage from approximatle MP 76 to MP 56. The map below shows the project area on the Kenai Penninsula in relation to Anchorage.

Esri, USGS | Kenai Peninsula Borough, Municipality of Anchorage, State of Alaska, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

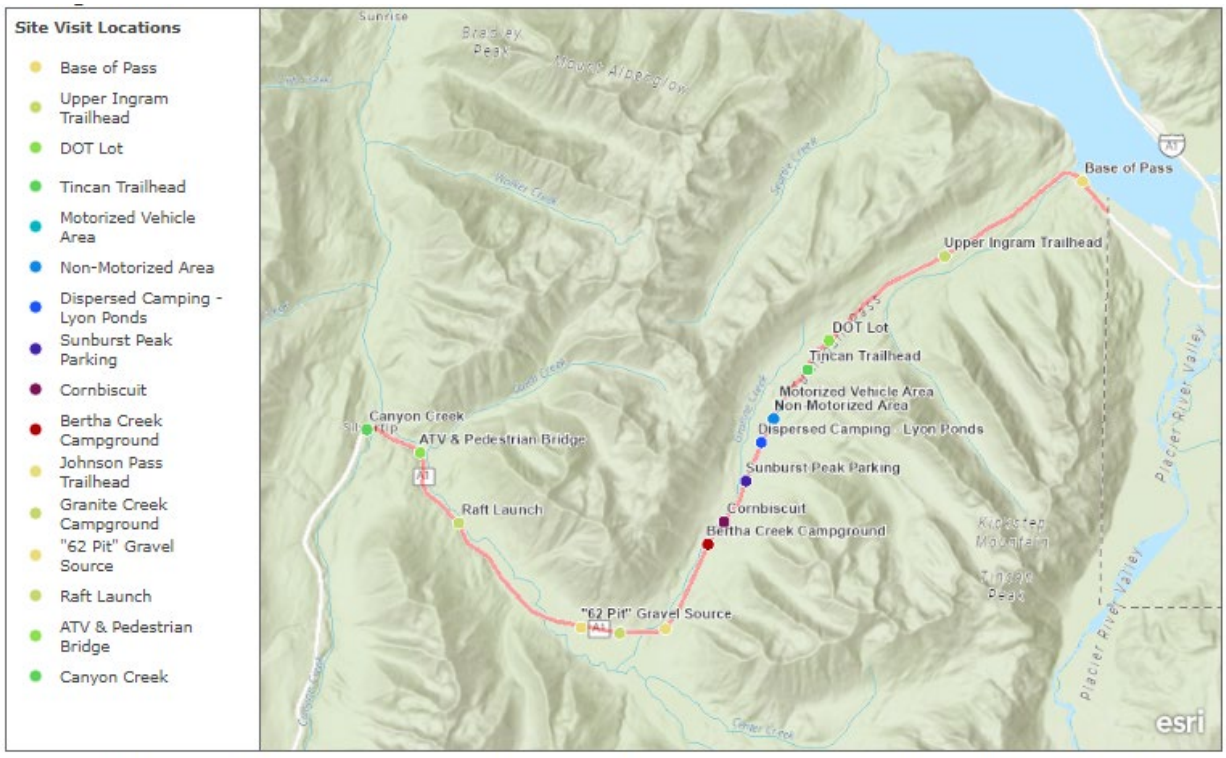
Site Visit Team

The project site visit team was composed of Alaska Department of Transportation and Public Facilities (DOT&PF), US Forest Service (USFS), and FHWA Western Federal Lands (WFL). The team is listed below, including those that attended and/or helped organize the site visit.

- Adam Cross (USFS)
- Andrew Roseman-Hanauer (WFL)
- Cody Kapotak (USFS)
- Cole Grisham (WFL)
- Danielle Snyder (USFS)
- David Post (Alaska DOT&PF)
- Griff Berg (USFS)
- Jason Stancil (USFS)
- Jesse Labenski (USFS)
- Joselyn Biloon (Alaska DOT&PF)
- Timothy Charnon (USFS)
- Will Brennan (USFS)

Site Visit Route and Locations

The site visit team examined specific locations along the project route to understand the recreation, parking, safety, and other needs within and adjacent to the corridor. The map below highlights the locations visited, which the remainder of this report is organized by.



Esri, USGS | Kenai Peninsula Borough, Municipality of Anchorage, State of Alaska, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA

Base of Pass

The Base of Pass site is considered the beginning of the corridor project limits. The site is a highway pull off and parking area for both directions of traffic. Attendee considerations for the area are llisted below.

- The lot or near by could serve as a gateway to the Iditarod National Historic Trail that runs parrallel to Seward Highway.[1] Seven to eight mile trail planned between lot to connect to Iditarod NHT.
- The lot is often used for informal camping as well as staging for Alaska DOT&PF uses; DOT owned; lots of RVs, tourists and construction workers, no permits, not supposed to camp, no enforcement
- The lot's intended use is for chain installation and removal for those entering and existing the pass as well as for snow plow turnaround
- Served by Alaska DOT&PF maintenance yard in Girdwood
- Possible current or future use for fishing and transit
- Need for bathroom facility and maintenance solution, but no one wants to maintain
- Future use likely for mountain bikers
- Enforcement challenges due to only five state troopers for entire corridor

[1] See: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd1075292.pdf

- Risk of pedestrians crossing highway between pullouts; more so if Iditarod NHT added or improved
- Current overflow parking for snow machine users

Upper Ingram Trailhead

- Iditarod National Historic Trail (INHT) connection; 12 mile trail adjoining highway
- Generally not enough capacity here, gets plowed well, increasing winter use
- Similar to Tincan, but less users and one mile further away from the best ski area that Tincan serves
- USFS is proposing about five cabins between sea level and Johnson North
- Initially built as a slow vehicle turnout by AK DOT&PF
- Snow plows push snow into breaks in guardrail, but that is where the trails are accessed
- Alaska Long Trail (proposed)- Seward to Fairbanks, similar to Pacific Crest Trail
- No significant crash history here

DOT Lot

- Not DOT owned, maintained, or plowed plowed
- Surrounded by State owned land
- Up-trail for snow machines to get to Seattle Ridge
- Early season, trucks will ramrod through for ski access before snow machines start
- Potential for plowable redesign; could be RV use since it's off of the highway
- Potential for mountain bike use
- Weather station on site
- Could consider cabins at this location
- Proposed new parking area across from DOT lot by USFS

Tincan Trailhead

- Top priority for improvements by USFS
- Skier preferred area here since terrain isn't as steep, it's treed, and has a shorter approach
    - Relatively safe from avalanches
- Lot fills up immediately and only has room for 25 cars; need for 50 cars per day capacity or more
- Huge safety issue with crash clusters
    - Pullout located on horizontal and vertical curve
    - Lane merge on the highway right at pullout
    - Very little sight distance
    - High speeds on highway
- Cabin planned on Iditarod
- Conceptual plan to move north and expand parking lot off road down into Alder patch-flat wide area about 2000 feet away
    - Would allow for shorter and easier ski descent, as well
- Would like summer connection to Iditarod Trail
- Proposed new parking area across from DOT lot by USFS
- Joselyn (AKDOT&PF) proposed $1.5M needed for planning and design for safety here
- Peak use in February-March

Motorized and Non-Motorized Areas

- The two lots are distinct in that snowmachines are allowed on public lands on the North/West side of the highway and non-motorized on the South/East side of the highway
- Mostly used for snow machine lot
- Paved loop to "nowhere," potentially can be used for day use area or trail head or pavilion
- Would like to see bike park, trails, other summer recreation facilities
- INHT motorized route, but not distinct except for bridges, since it's covered in snow in the winter
- High-use toilets cause a maintenance issues, since its expensive to pump
- Often used as a rest stop for highway users, which is not the facilities intent or design
- Attendees suggest need for gas station on corridor, possibly near Motorized lot.

Dispersed Camping – Lyon Ponds

- The only dispersed camping in the project area or wider pass
- First come first served; free with no facilities
- Fisheries are improving habitat
- Could turn into potential bike park, trail system, camping management with barrier rocks, fire rings, picnic tables, toilets
-
- Would need driveway permit if improved to update the steep, sharp-curved entrance that wraps behind the guardrail
- Not being considered for a cabin location

Sunburst Peak Parking

No notes taken at this site. Issues and opportunities discussed are similar to other pull-out parking areas for recreation actiivities in the project area.

Cornbiscuit

No notes taken at this site. Issues and opportunities discussed are similar to other pull-out parking areas for recreation actiivities in the project area.

Bertha Creek Campground

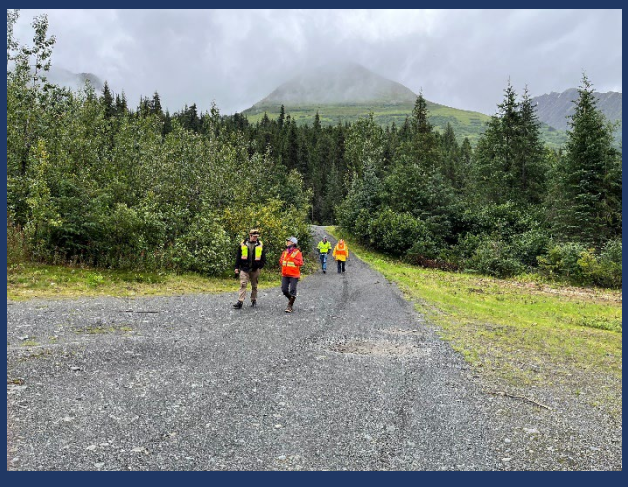
A small loop fee campground with 12 sites suitable for vehicle camping, small RVs, and tents.[2]
Contains:

- tables, toilets, fire pits
- USFS: Not really a destination; no good views
- Recreational mining nearby
- snow machine trail nearby
- USFS referred to the site as an "uncompelling campground"

Bertha Pullout (located about 700' south of campground entrance)

- Snow machines park here, which connects snow machine trail
- Overflow parking, gets very busy in the winter, no purpose in the summer
- Would like to make this pullout into an actual parking lot away from the highway

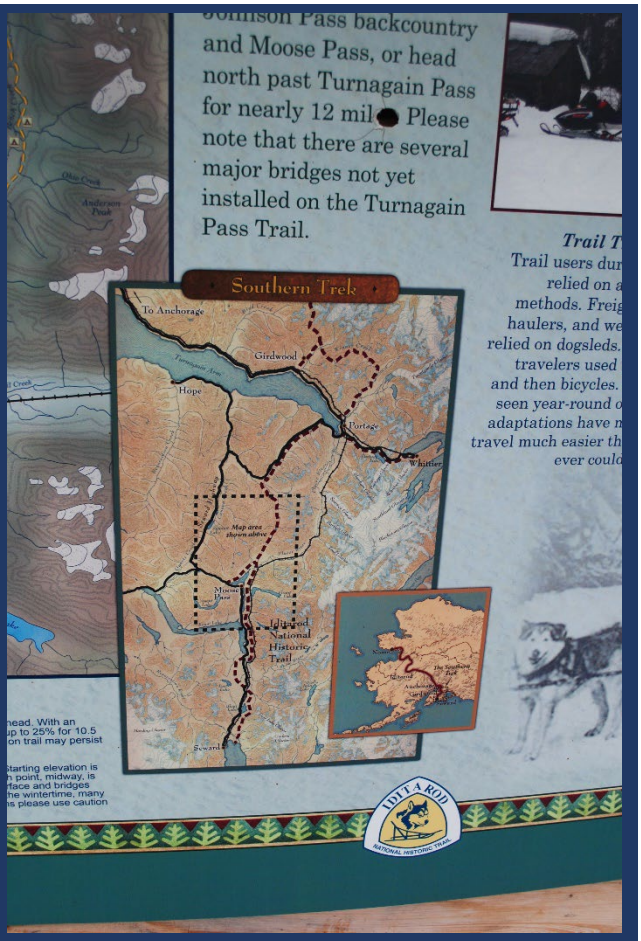
[2] See: https://www.fs.usda.gov/recarea/chugach/recarea/?recid=6600



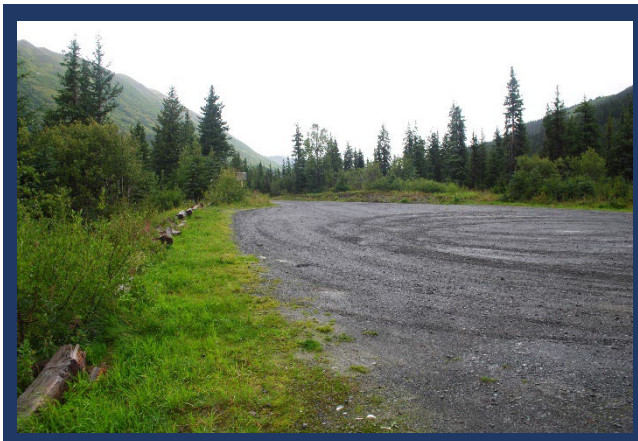
Johnson Pass Trailhead

- Start of Johnson Pass North Trail; 23 miles, very popular, family backpackers and mountain bike users
- Turnagain Pass Trail terminates here, part of the Iditarod Trail
- Would like to be regraded and rebrushed for retrofit
- Proposed cabin 2.5 miles in
- DOT sometimes plows, parking lot gets packed
- Potential for apron or acceleration and deceleration lanes from highway, big safety concerns for the highway access
- Could be an option for day use site since it's away from the highway and has existing toilets
- Full on the weekends
- Great American Outdoors Act to improve this trail
- Proposed cabin about two miles into trail area
- Possible need for traffic impact analysis for site


Johnson Pass North
Existing year-round trail
Planned summer trail
Existing winter trail, non-motorized May 1-Dec. 1
Other trail (non-motorized)
Paved road
Railroad
Trailhead
Campground
No bridge
Point of Interest
Turnagain Pass Snowmachine Trail
Turnagain Pass Trail
Granite Creek
YOU ARE HERE
Johnson Pass North
White's Roadhouse
Trail Transportation
Johnson Pass Trail
Tenderfoot Creek
Carter Lake
Carter Lake Trail
Mossy Pass
Grant Lake Portage Trail
Trail Conditions
Johnson Pass Trail (23 miles): Johnson Pass trail is accessed south of this trailhead. With an overall elevation gain of 800 feet, this trail has short, steep sections with grades up to 25% for 10.5


Johnson Pass backcountry and Moose Pass, or head north past Turnagain Pass for nearly 12 mil● Please note that there are several major bridges not yet installed on the Turnagain Pass Trail.
Trail T
Trail users dur
relied on a
methods. Freig
haulers, and we
relied on dogsleds.
travelers used
and then bicycles.
seen year-round o
adaptations have n
travel much easier th
ever could
Southern Trek
To Anchorage
Girdwood
Hope
Portage
Whittier
Map area shown above
Iditarod National Historic Trail
Seward
IDITAROD
NATIONAL HISTORIC TRAIL


IDITAROD
National Historic Trail
Johnson Pass North Trailhead
Trace the path of the Iditarod Trail along the Seward Highway
~ Points of Interest ~
Follow Johnson Pass Trail south toward the beautiful Johnson Pass backcountry and Moose Pass, or head north past Turnagain Pass for nearly 12 mil● Please note that there are several major bridges not yet installed on the Turnagain Pass Trail.
◄ White's Roadhouse
~1 mile on snowmachine trail; difficult summer access~
During the Gold Rush of 1897, entrepreneurs built roadhouses and dog barns along the Iditarod Trail to feed and shelter trail users. Nathan White built this home in 1904 to connect the mining communities of Sunrise and Hope. It grew to a small mining camp by the 1920s.
▲ Spokane Falls
~2 miles from the trailhead~
Spokane Falls is the size of one of the trails future bridges. Until it is installed, the best way to view the falls is from the trail.
Trail Transportation ►
Trail users during the Gold Rush relied on a variety of transit methods. Freight shippers, mail haulers, and wealthy passengers relied on dogsleds. Less prosperous travelers used snowshoes, skis, and then bicycles. Bikes are again seen year-round on this trail, but adaptations have made over-snow travel much easier than prospectors ever could have dream!
Southern Trek
Trail Conditions
The Iditarod National Historic Trail



Granite Creek Campground

A small loop fee campground suitable for vehicle camping, RVs, and tents with 19 sites posted online. Vault toilet, hand driven water pump, dumpster, picnic tables, fire rings, bear lockers.[3]

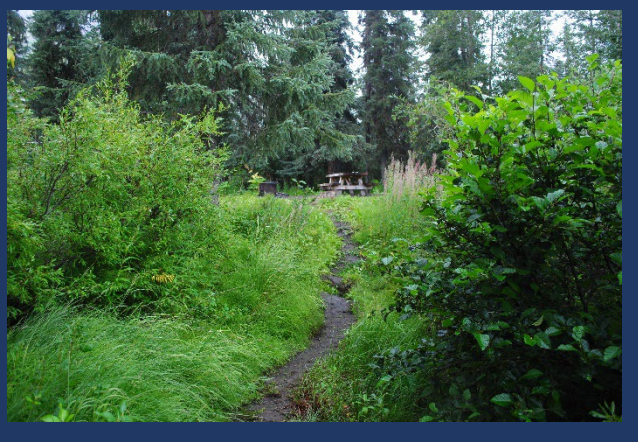
- 14 total sites with two decommissioned
- USFS says there are places for possibly 40 total sites
- Snow machine trail crosses through here
- Most "tired" campground according to USFS; outdated, smaller toilets, old signs
- Needs regrading, more fill, repair and enlarge parking pads
- No good way to access creek, no good established tent sites
- Picnic tables were recently rehabilitated
- Cabins proposed for this site; may be best possible site for expansion in project area
- No winter use currently; snow machines pass through though

[3] See: https://www.fs.usda.gov/recarea/chugach/recreation/camping-cabins/recarea/?recid=6603&actid=29


No Fireworks
Granite Creek

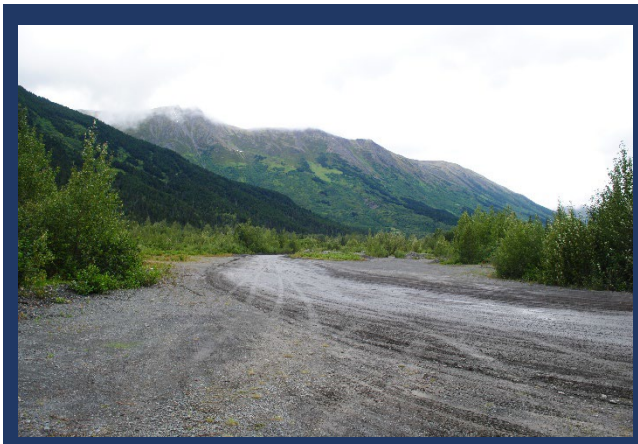

SELF-SERVICE PAY STATION
Bear Country
Campsite

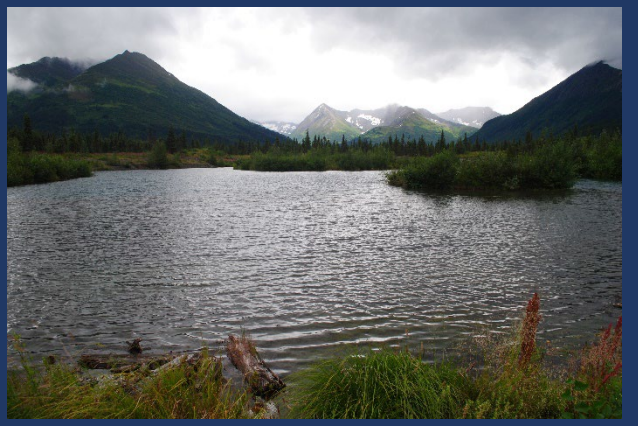

The Beetle and the Forest
How the beetle kills...
CHUGACH National Forest

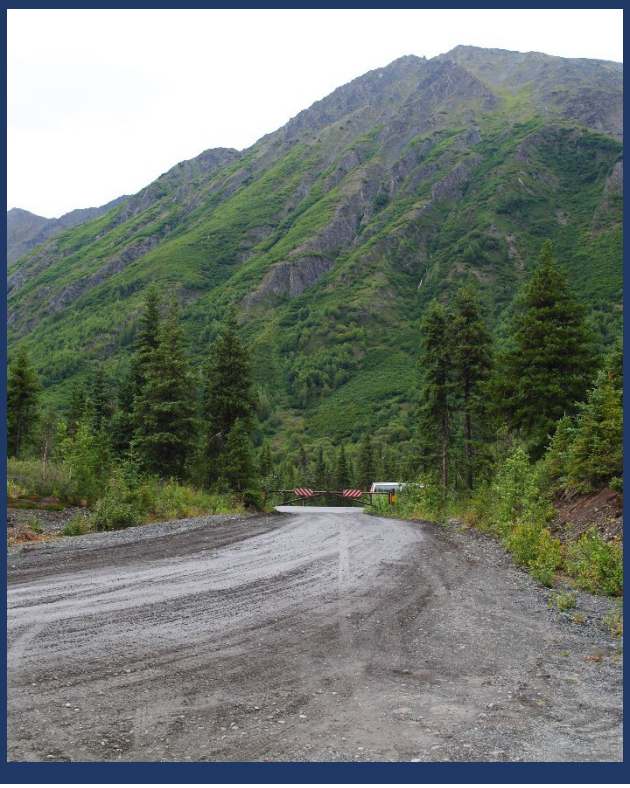


“62 Pit” Gravel Source

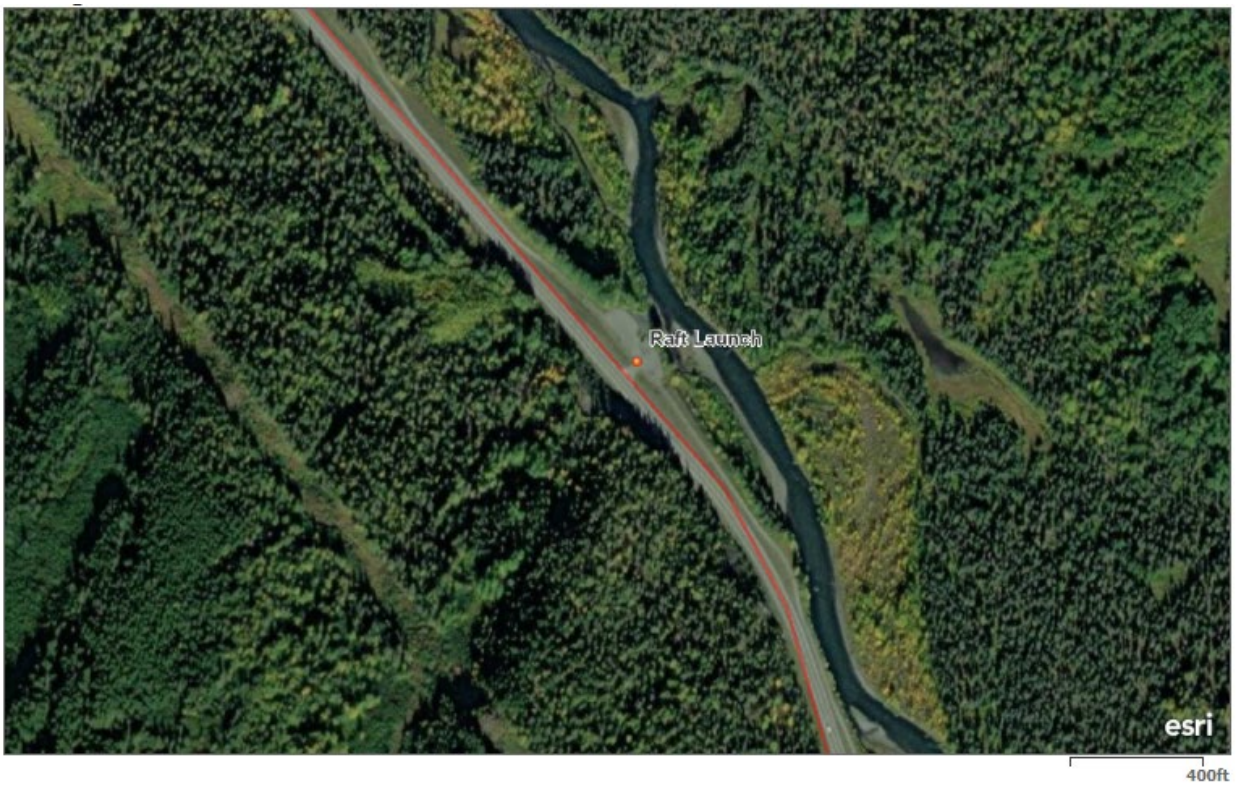
- Used as helipad for skiing; snow machine trail terminus
- Gets plowed by Alaska DOT&PF
- USFS wants to make it a Recreation Area due to proximity to ponds
- 100,000 tons of gravel will be removed from here for Seward Highway Project; mine uses ending
- Needs beautification
- No obvious use; could reach out to public for preference
- Dispersed camping possible and van-life if it won’t get trashed
- Could be of interest to outfitter, guide, or a developer
- There is a recreation sign on the highway showing the gravel pit area as a recreation area, which is not accurate (see Google street at right)
- Considered “blank slate” by attendees
- Consider adding a ‘warming shelter’ for winter recreation users







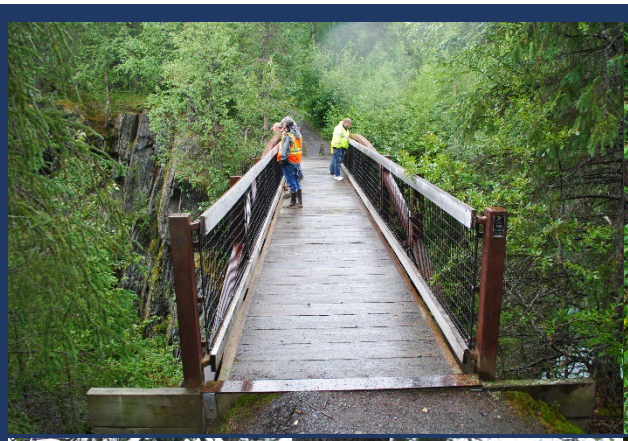
Raft Launch



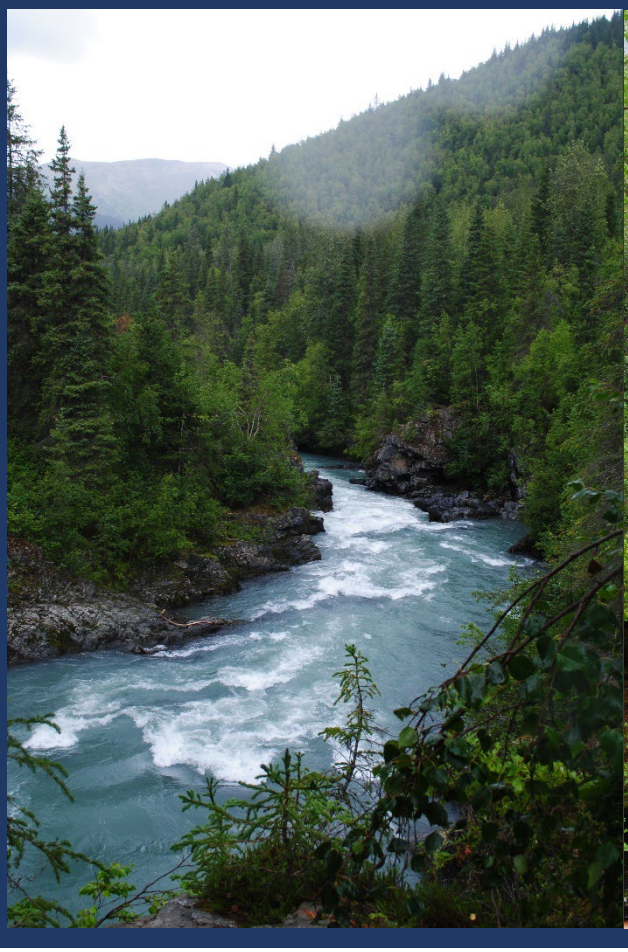
- State owned facility; may be called "East Fork Boat Launch"
- Used by rafting guides

ATV and Pedestrian Bridge (Gulch Creek)

No notes taken for this site. Attendess said this is a good location for seeing rafters and there is some recreational mining that exists (see picture on following page). It is not clear if the bridge connects to another trail system on North side of highway and river.




REGISTERED MINING CLAIM
WARNING
Security
Cameras In Use



Canyon Creek

- Alaska Department of Natural Resource (DNR) owned (not AKDOT&PF)
- Closed in winter
- Official rest area (as opposed to Motorized lot, which is used as a rest area)
- USFS wants it open in the winter to alleviate traffic and bathroom use from other sites
- Old bridge closed to vehicles, but open to pedestrians; no plans to change
- Could be a 'gateway' area for Turnagain Pass, like the Base of Pass site

Summary Themes and Next Steps

Following the site visit, attendees discussed broad themes for the project area, which are summarized below.

1. **Capacity**. The use of individual recreation sites varies considerably across the project area and between seasons. This situation creates unbalanced demand and strain on facilities that attendees hope to alleviate.
2. **Connections**. Attendees would like to see facilities in project area better linked together as a single system, including trail networks, multi-modal connections, and supporting facilities.
3. **Engineering.** WFL staff sees potential for improving and/or expanding the pullouts and parking areas along the corridor, especially at Tincan and Bertha Creek Campground. There appears to be fewer constraints for shoulder and parking expansion as needed compared to other corridors WFL works on (I.e., there are not steep rocky cliffs here and there is level ground, which is potentially available for site development). The DOT Lot has great potential for development, since it's off the highway, but WFL staff are concerned with users crossing the highway to access Tincan. The obvious issue is determining who will maintain and plow these lots.
4. **Safety.** Low-cost improvements such as signing, and striping could alert motorists to crossing peds and bikes at the Base of Pass site. For Tincan, consider moving the access to a tangent highway section and widening the highway to install turn lanes as a possible. The corridor mostly has larger shoulders through the corridor, which is helpful for safety design considerations. Guardrail appears to be in decent shape and does not appear out of standard, but a further safety study would confirm. A traffic impacts analysis, traffic impact statement, and/or traffic corridor modeling would provide a better idea of how the traffic moves through this area. WFL staff did not hear a desire from USFS or AKDOT&PF to reduce traffic speeds.
5. **Snow Plowing**. Snow plowing at recreation sites, including pull offs and larger lots, seems to be limited and varied, but is valuable for safe recreation. Attendees were interested in a more consistent plowing program for the project area, either by Alaska DOT&PF or by a contractor.
6. **Operations and Maintenance Capacity**. The varied stress placed on sites in the project area, such as bathroom maintenance, snow plowing, and other maintenance activities, raise the issue of how to fund and manage long-term operations. Attendees are interested in funding opportunities, such as fee systems, to develop a more sustainable recreation operations program for the project area.