

3.2 LAND OWNERSHIP, MANAGEMENT, AND USE

This section describes the regulatory setting, along with the baseline conditions of land ownership, land management, and existing land use patterns in the Environmental Impact Statement (EIS) analysis area, which is the project footprint for land ownership and management, and adjacent lands for land use. Relevant land use plans are discussed, and land status maps display land ownership for the EIS analysis area (Figure 3.2-1A through Figure 3.2-1E) (see Section 3.5, Recreation; Section 3.7, Cultural Resources; and Section 3.9, Subsistence, for additional details on recreational, cultural, and subsistence uses, respectively).

3.2.1 Land Ownership

Land ownership was determined using general land status data, which are accurate to the scale of 1 square mile (i.e., one section), and data of the project footprint (BLM 2019a).

The entire footprint of project alternatives being evaluated in the EIS would be on lands owned by the State of Alaska, or privately owned by individuals or by Alaska Native Claims Settlement Act (ANCSA) Native regional (typically subsurface estate), village corporations (surface estate), or Native Allotments. Land ownership is shown in Table 3.2-1. The acres include temporary impacts. The transportation corridor includes spur roads to communities.

Neither Alternative 1a nor Alternative 1 would bisect any Native Allotments. The Alternative 2 components would bisect five Native Allotments, and Alternative 3 would bisect four. The Diamond Point port and facilities would be on Native Allotments AKAA 4592A and AKAA 4225B under Alternative 2, and Native Allotments AKAA 4225B and AKAA 051014 under Alternative 3. There would be no unconveyed Native Allotments in the EIS analysis area.

Land where the transportation corridor would cross the Newhalen River (all alternatives) is owned by the Iliamna Natives Limited village corporation. Land where the transportation corridor would cross the Gibraltar River (Alternative 1a and Alternative 1) is owned by the Alaska Peninsula Corporation village corporation.

Table 3.2-1: Land Ownership in Acres

Owner ¹	Alternative 1a	Alternative 1	Alternative 2	Alternative 3
Mine Site				
State of Alaska	8,390	8,390	N/A	8,390
<i>Downstream Variant</i>				
State of Alaska	N/A	N/A	8,497	N/A
<i>Concentrate Pipeline Variant</i>				
State of Alaska	N/A	N/A	N/A	8,390
<i>Summer Ferry Only Variant</i>				
State of Alaska	N/A	8,425	8,532	N/A
Transportation Corridor				
Cook Inlet Region, Inc.	--	--	7	8
Alaska Peninsula Corporation	295	537	--	121
Iliamna Natives Limited	368	71	368	473
Pedro Bay Corporation	--	51	212	905
Salmatof Native Association, Inc.	--	--	3	3
Seldovia Native Association, Inc.	--	--	51	51

Table 3.2-1: Land Ownership in Acres

Owner ¹	Alternative 1a	Alternative 1	Alternative 2	Alternative 3
Tyonek Native Corporation	--	--	119	121
Native Allotment AKA 63274A ²	--	--	--	>1
Native Allotment AKAA 4592A	--	--	3	--
Native Allotment AKAA 6025B	--	--	6	--
Native Allotment AKAA 51014	--	--	16	13
State of Alaska	1,130	1,139	532	748
Water	--	--	32	24
<i>Kokhanok East Ferry Terminal Variant</i>				
Alaska Peninsula Corporation	N/A	511	N/A	N/A
Iliamna Natives Limited	N/A	71	N/A	N/A
Pedro Bay Corporation	N/A	30	N/A	N/A
State of Alaska	N/A	1,153	N/A	N/A
<i>Summer-Only Ferry Operations Variant</i>				
Cook Inlet Region, Inc.	N/A	--	7	N/A
Alaska Peninsula Corporation	N/A	537	--	N/A
Iliamna Natives Limited	N/A	71	368	N/A
Salamatof Native Association, Inc.	N/A	--	3	N/A
Seldovia Native Association, Inc.	N/A	--	52	N/A
Tyonek Native Corporation	N/A	--	125	N/A
Pedro Bay Corporation	N/A	30	151	N/A
Native Allotment AKAA 4592A	N/A	--	3	N/A
Native Allotment AKAA 6025B	N/A	--	6	N/A
Native Allotment AKAA 51014	N/A	--	25	N/A
State of Alaska	N/A	1,139	532	N/A
Water	N/A	--	41	N/A
<i>Newhalen River North Crossing Variant</i>				
Cook Inlet Region, Inc.	N/A	N/A	7	N/A
Iliamna Natives Limited	N/A	N/A	259	N/A
Salamatof Native Association, Inc.	N/A	N/A	3	N/A
Seldovia Native Association, Inc.	N/A	N/A	51	N/A
Tyonek Native Corporation	N/A	N/A	119	N/A
Pedro Bay Corporation	N/A	N/A	212	N/A
Native Allotment AKAA 4592A	N/A	N/A	3	N/A
Native Allotment AKAA 6025B	N/A	N/A	6	N/A
Native Allotment AKAA 51014	N/A	N/A	16	N/A
State of Alaska	N/A	N/A	532	N/A
Water	N/A	N/A	32	N/A
Amakdedori Port				
State of Alaska	29	29	N/A	N/A
Water	7	13	N/A	N/A

Table 3.2-1: Land Ownership in Acres

Owner ¹	Alternative 1a	Alternative 1	Alternative 2	Alternative 3
<i>Pile-Supported Dock Variant</i>				
State of Alaska	N/A	29	N/A	N/A
Water	N/A	6	N/A	N/A
<i>Summer-Only Ferry Operations</i>				
State of Alaska	N/A	57	N/A	N/A
Water	N/A	13	N/A	N/A
Natural Gas Pipeline				
Cook Inlet Region, Inc.	--	--	78	78
Alaska Peninsula Corporation	15	37	--	--
Iliamna Natives Limited	190	--	90	--
Pedro Bay Corporation	--	--	765	--
Salmatof Native Association, Inc.			29	29
Native Allotment AKA 63274A ²	--	--	5	--
Native Allotment AKAA 4592A	--	--	<1	<1
Private	1	1	1	1
State of Alaska	39	40	138	29
Water	761	738	644	638
<i>Kokhanok East Ferry Terminal Variant</i>				
Alaska Peninsula Corporation	N/A	59	N/A	N/A
Private	N/A	1	N/A	N/A
State of Alaska	N/A	40	N/A	N/A
Water	N/A	751	N/A	N/A
Kenai Compressor Station				
State of Alaska	2	2	2	2
Private	1	1	1	1
Diamond Point Port				
Native Allotment AKAA 4225B	N/A	N/A	51	--
Native Allotment AKAA 051014	N/A	N/A	--	15
Seldovia Native Association, Inc	N/A	N/A	--	18
Tyonek Native Corporation	N/A	N/A	--	3
Water	N/A	N/A	83	92
<i>Pile-Supported Dock Variant</i>				
Native Allotment AKAA 4225B	N/A	N/A	51	N/A
Water	N/A	N/A	79	N/A
<i>Concentrate Pipeline Variant</i>				
Seldovia Native Association, Inc	N/A	N/A	--	18
Tyonek Native Corporation	N/A	N/A	--	3
Native Allotment AKAA 051014	N/A	N/A	--	15
Water	N/A	N/A	N/A	92
Ferry Terminals				

Table 3.2-1: Land Ownership in Acres

Owner ¹	Alternative 1a	Alternative 1	Alternative 2	Alternative 3
Alaska Peninsula Corporation	28	35	--	N/A
Iliamna Natives Limited	9	--	9	N/A
Pedro Bay Corporation	--	--	21	N/A
<i>Kokhanok East Ferry Terminal Variant</i>				
Alaska Peninsula Corporation	N/A	18	N/A	N/A
Material Sites				
Alaska Peninsula Corporation	39	72	--	--
Seldovia Native Association, Inc.	--	--	13	13
Tyonek Native Corporation	--	--	29	29
Iliamna Natives Limited	101	9	101	122
Pedro Bay Corporation	--	9	40	266
State of Alaska	239	160	138	175
<i>Kokhanok East Ferry Terminal Variant</i>				
Alaska Peninsula Corporation	N/A	112	N/A	N/A
Iliamna Natives Limited	N/A	9	N/A	N/A
Pedro Bay Corporation	N/A	9	N/A	N/A
State of Alaska	N/A	228	N/A	N/A
<i>Summer-Only Ferry Operations Variant</i>				
Seldovia Native Association, Inc.	N/A	N/A	13	N/A
Tyonek Native Corporation	N/A	N/A	29	N/A
Iliamna Natives Limited	N/A	N/A	101	N/A
Pedro Bay Corporation	N/A	N/A	40	N/A
State of Alaska	N/A	N/A	138	N/A
<i>Newhalen River North Crossing Variant</i>				
Seldovia Native Association, Inc.	N/A	N/A	13	N/A
Tyonek Native Corporation	N/A	N/A	29	N/A
Iliamna Natives Limited	N/A	N/A	119	N/A
Pedro Bay Corporation	N/A	N/A	40	N/A
State of Alaska	N/A	N/A	138	N/A

Notes:

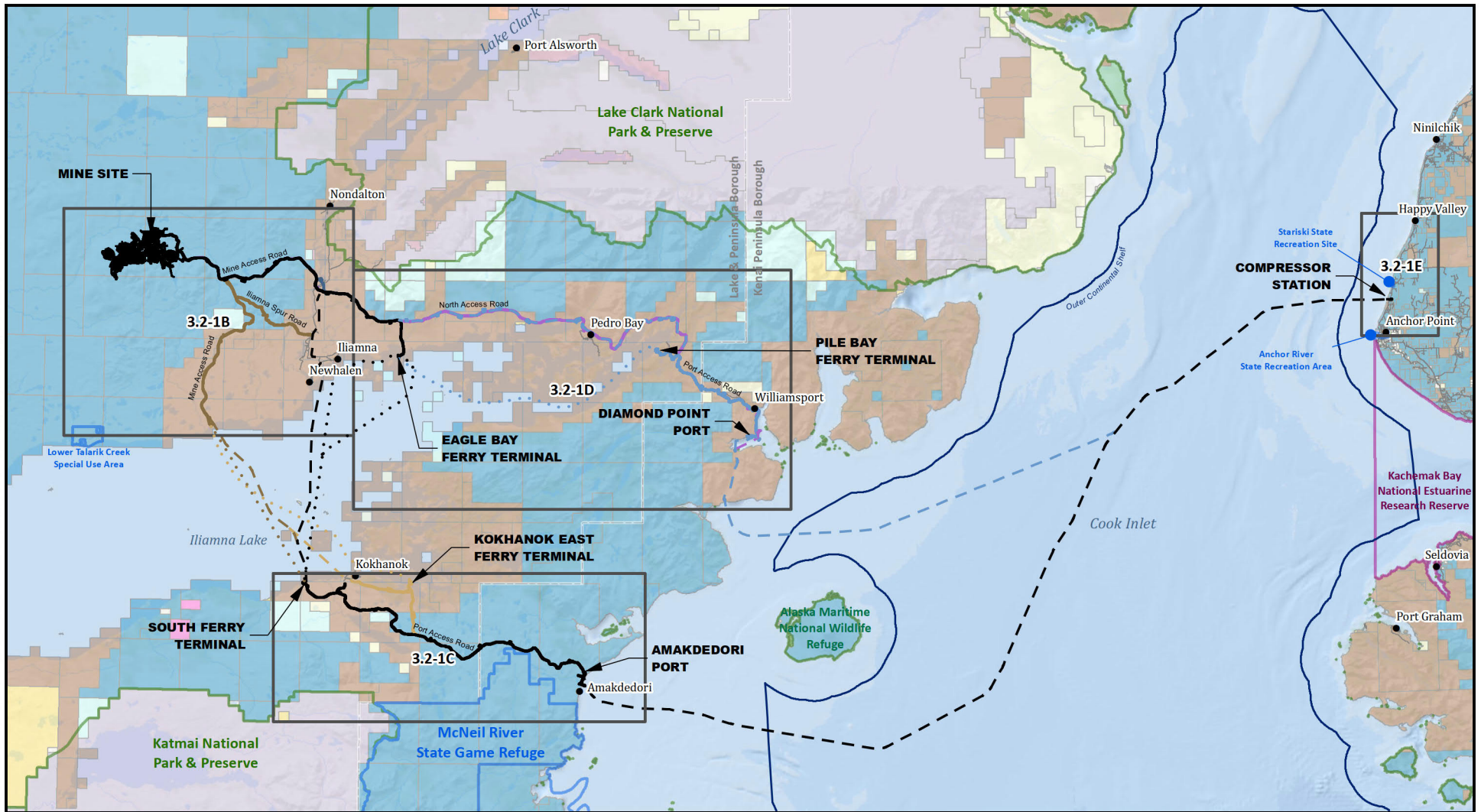
¹Lands shown as being owned by the State of Alaska include University of Alaska lands

²Ownership of Native Allotment AKA 63274A is the Bristol Bay Native Corporation

-- = No lands owned by that entity

N/A = Not applicable

Source: BLM 2019a



Sources: PLP 2020-RF1168; PLP 2019-RF1153;
ADNR 2012, 2015, 2017, 2019; BLM 2017, 2019;
NERRS 2000; NOAA 2011; USFWS 2017



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Administrative Boundaries

Outer Continental Shelf

Borough Boundary

Native Patent, Interim

Conveyed, or Other

Conveyance

State Patent or Tentatively

Approved

Private

Miscellaneous Title

Miscellaneous Withdrawals

Native Selected

State Selected

National Park Service

Military

Fish and Wildlife Service

Bureau of Land Management

Alaska Special Use Lands

Designation

Federal Conservation System

Unit

Kachemak Bay National

Estuarine Research Reserve

Action Alternatives

..... Ferry Routes

Natural Gas Pipelines

Alternative 1a

Alternative 1

Alternative 1 Kokhanok East

Ferry Terminal Variant

Alternative 2

Alternative 2 Newhalen River

North Crossing Variant

Alternative 3

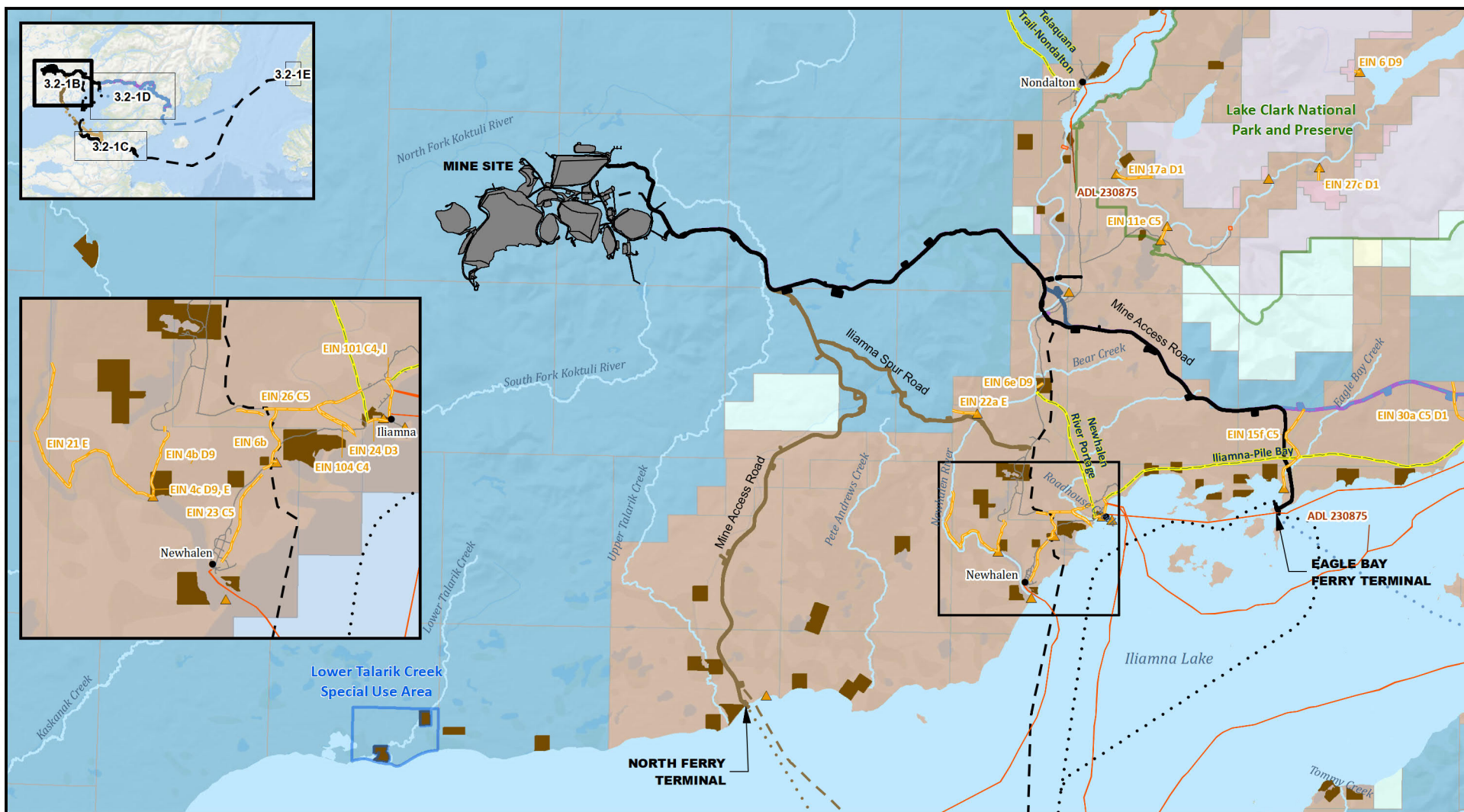
Other Features

..... Roads

**GENERALIZED
LAND STATUS
OVERVIEW MAP**

FIGURE 3.2-1A

PEBBLE PROJECT EIS



Sources: PLP 2020-RF1168; PLP 2019-RF1153; ADNR 2012, 2015, 2017, 2019; BLM 2017, 2019; NERRS 2000; NOAA 2011; USFWS 2017



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Administrative Boundaries

- 17(b) Easement Site
- 17(b) Easement Trail
- RS 2477
- State Easement
- Native Allotment

Native Patent, Interim Conveyed, or Other Conveyance

- State Patent or Tentatively Approved
- Private
- Miscellaneous Title Transfers
- Miscellaneous Withdrawals

Native Selected

- State Selected
- National Park Service
- Bureau of Land Management
- State Special Use Lands Designation
- Federal Conservation System Unit

Action Alternatives

- Ferry Routes
- Natural Gas Pipelines
- Alternative 1a
- Alternative 1
- Alternative 2
- Alternative 2 Newhalen River
- North Crossing Variant

Alternative 3

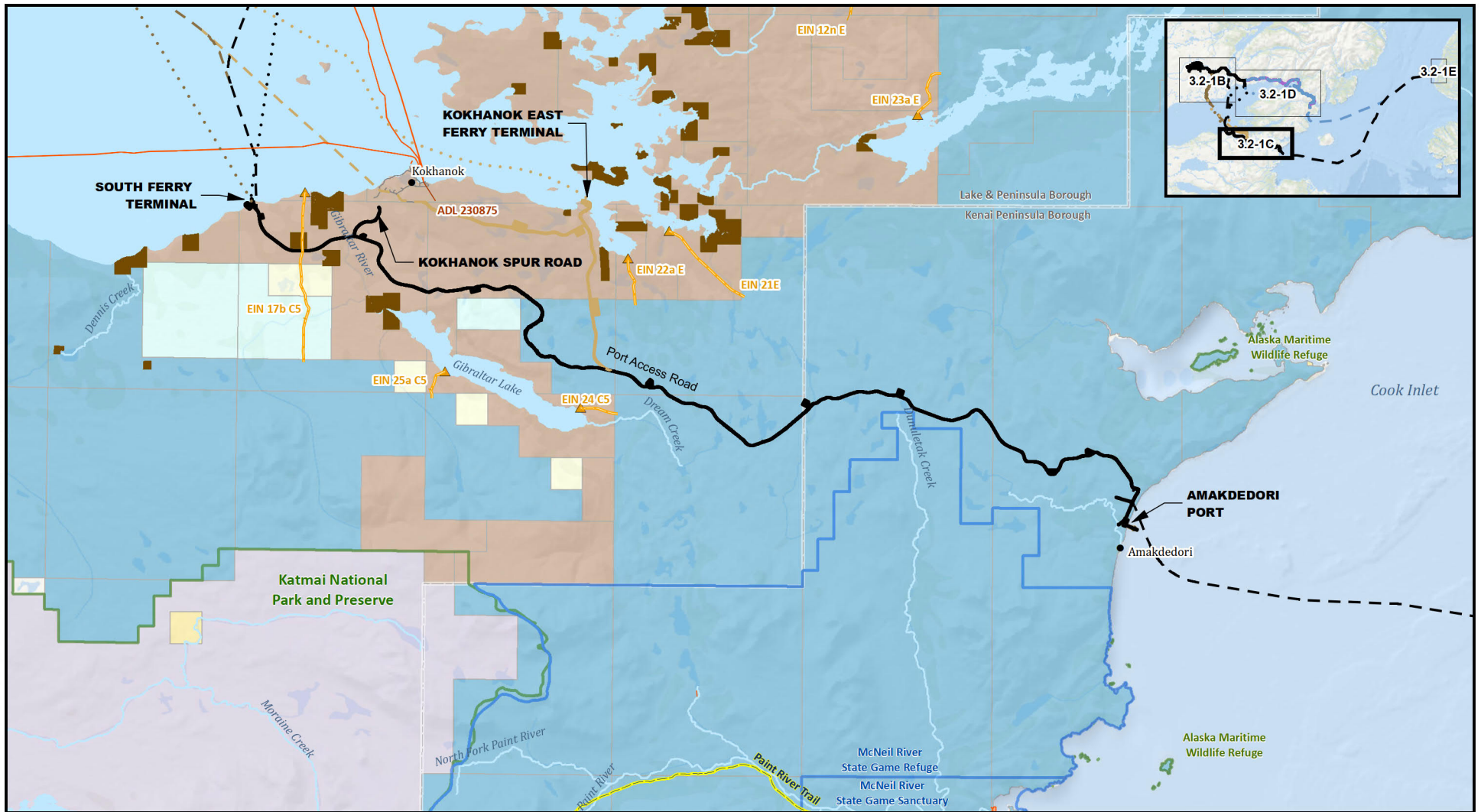
Other Features

Roads

GENERALIZED LAND STATUS
MINE SITE TO NORTH FERRY TERMINAL

FIGURE 3.2-1B

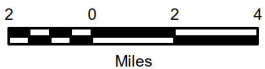
PEBBLE PROJECT EIS



Sources: PLP 2019-RF1153; ADN 2012, 2015, 2017, 2019; BLM 2017, 2019; NERRS 2000; NOAA 2011; USFWS 2017



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Administrative Boundaries

- ▲ 17(b) Easement Site
- 17(b) Easement Trail
- RS 2477
- State Easement
- Borough Boundary
- Native Allotment

Native Patent, Interim Conveyed, or Other Conveyance

- State Patent or Tentatively Approved
- Private
- Native Selected
- State Selected

National Park Service

- Bureau of Land Management
- State Special Use Lands Designation
- Federal Conservation System Unit

Action Alternatives

- ... Ferry Routes

Natural Gas Pipelines

- Alternative 1a
- Alternative 1
- Alternative 1 Kokhanok East Ferry Terminal Variant

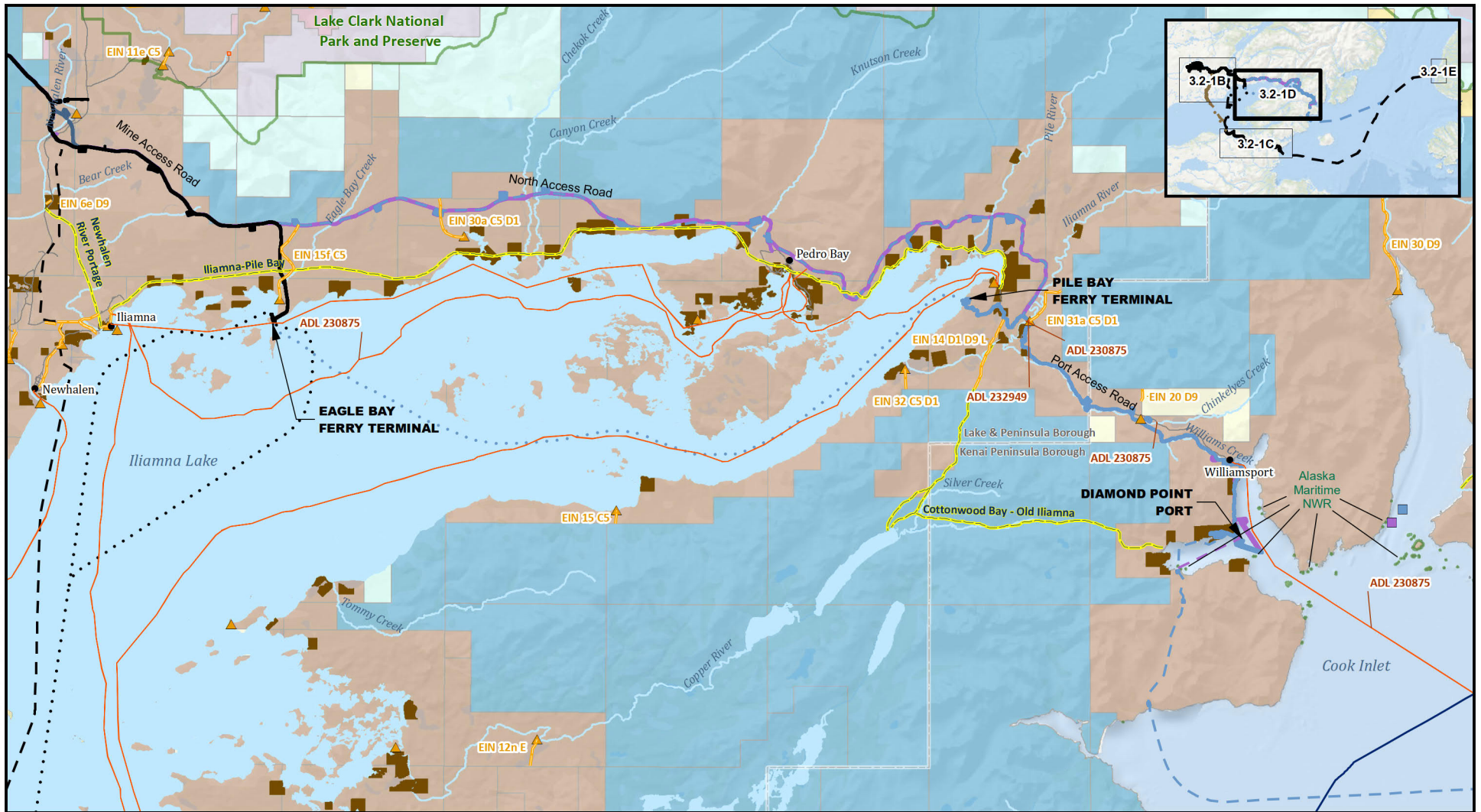
Other Features

- Roads

**GENERALIZED LAND STATUS
SOUTH FERRY TERMINAL TO AMAKDEDORI PORT**

FIGURE 3.2-1C

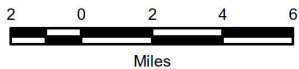
PEBBLE PROJECT EIS



Sources: PLP 2020-RFI168; PLP 2019-RFI153; ADNR 2012, 2015, 2017, 2019; BLM 2017, 2019; NERRS 2000; NOAA 2011; USFWS 2017



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Administrative Boundaries

- ▲ 17(b) Easement Site
- 17(b) Easement Trail
- RS 2477
- State Easement
- Borough Boundary
- Outer Continental Shelf
- Native
- Native Patent, Interim Conveyed, or Other Conveyance
- State Patent or Tentatively Approved
- Private
- Miscellaneous Title Transfers
- Miscellaneous Withdrawals
- Native Selected
- State Selected
- National Park Service
- Bureau of Land Management
- Federal Conservation System Unit

PEBBLE PROJECT EIS

Action Alternatives

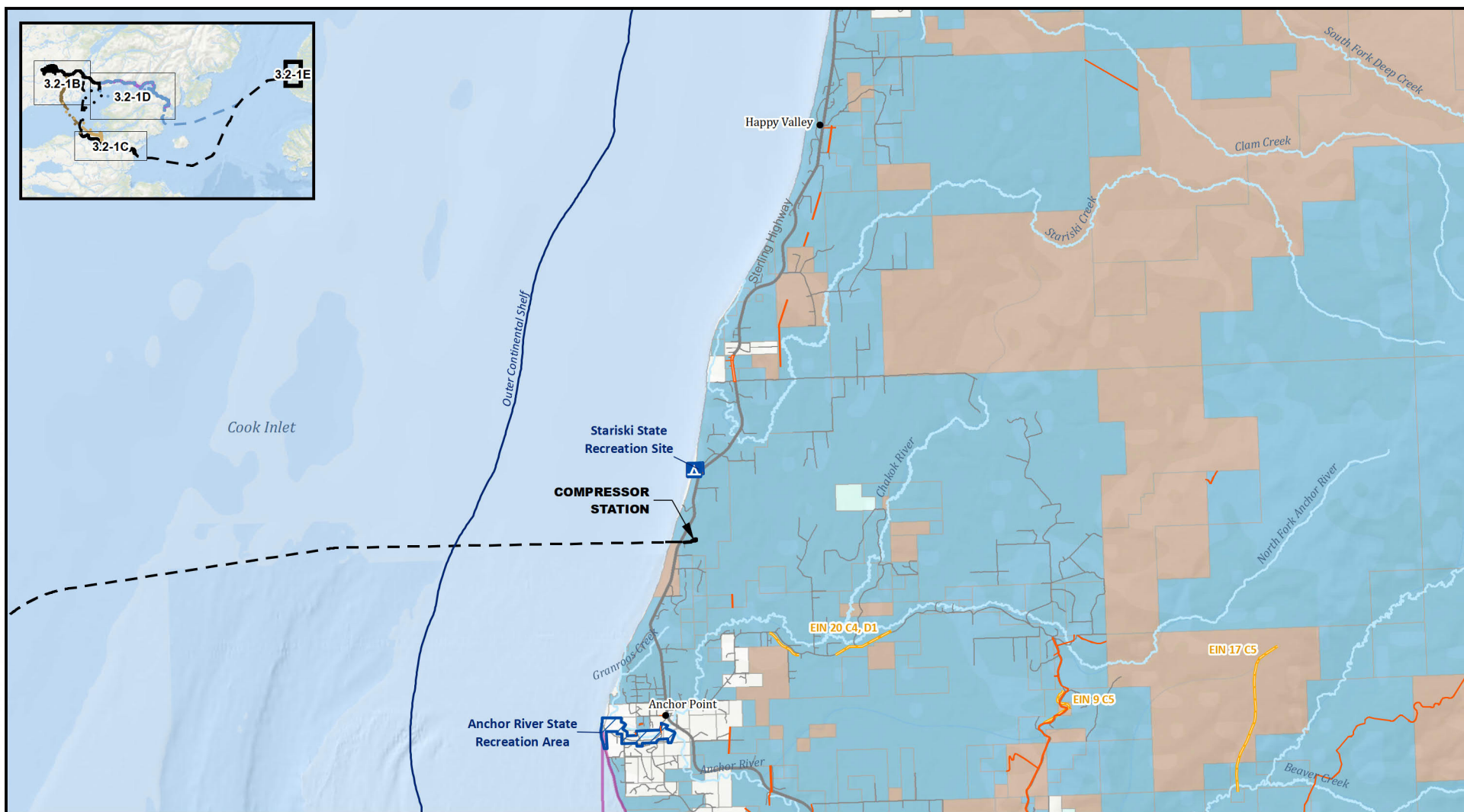
- Lightering Locations
- ... Ferry Routes
- Natural Gas Pipelines
- Alternative 1a
- Alternative 2
- Alternative 2 Newhalen River North Crossing Variant
- Alternative 3

Other Features

- Roads

GENERALIZED LAND STATUS EAGLE BAY TO DIAMOND POINT PORT

FIGURE 3.2-1D



Sources: PLP 2019-RF1153; ADN 2012, 2015, 2017, 2019; BLM 2017, 2019; NERRS 2000; NOAA 2011; USFWS 2017



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 Stariski State Recreational Site

Administrative Boundaries


-  17(b) Easement Trail
-  State Easement
-  Outer Continental Shelf
-  Native Patent, Interim Conveyed, or Other Conveyance

-  State Patent or Tentatively Approved
-  Private
-  Miscellaneous Title Transfers
-  Miscellaneous Withdrawals
-  Native Selected
-  State Selected
-  State Recreation Area

 Kachemak Bay National Estuarine Research Reserve

Action Alternatives

 Natural Gas Pipelines

 Alternative 1a

Other Features

 Roads

PEBBLE PROJECT EIS

**GENERALIZED LAND STATUS
ANCHOR POINT TO HAPPY VALLEY**

FIGURE 3.2-1E

3.2.1.1 Legal Access

In the EIS analysis area, there are mechanisms to ensure consistent surface access to public lands, and in some instances, private parcels or traditional access areas. These mechanisms for access include Revised Statute (R.S.) 2477 Rights-of-Way (ROWs), ANCSA Section 17(b) Easements, Alaska National Interest Lands Conservation Act (ANILCA) Sections 811 and 1110, State Section Line Easements, and State Public Access Easements.

Revised Statute 2477 Rights-of-Way

Section 8 of the 1866 Mining Act states that “the right-of-way for the construction of highways over public lands, not reserved for public uses, is hereby granted.” In 1873, the provision was separated from the Mining Act and re-enacted as R.S. 2477. In 1938, it was recodified as 43 United States Code (USC) Section 932. In 1976, the Federal Land Policy and Management Act repealed both the 1866 Mining Act and R.S. 2477, but all ROWs that existed on the date of repeal (October 21, 1976) were preserved under 43 USC Section 1769 through a savings provision for prior established rights.

Through statute or administrative action, the State of Alaska recognizes approximately 6,750 R.S. 2477 routes throughout the state (Alaska Statute [AS] 19.30.400). However, the validity of the grant is not dependent on those State recognitions.

There are no State-recognized R.S. 2477 easements in the footprint of Alternative 1. Alternative 1a, Alternative 2, and Alternative 3 would cross the Iliamna-Pile Bay R.S. 2477 ROW. Alternative 1a would also cross the Newhalen River Portage R.S. 2477 ROW, as listed in Table 3.2-2 and shown in Figure 3.2-1D.

Table 3.2-2: Revised Statute 2477 Rights-of-Way in the Project Footprint

ID	Name	Alternative	Project Component(s)
RST 396	Iliamna-Pile Bay	1a, 2	Mine Access Road
RST 396	Iliamna-Pile Bay	2	Natural Gas Pipeline (crosses in two locations), Material Sites
RST 396	Iliamna-Pile Bay	2	Transportation Corridor (Pipeline Construction Access)
RST 396	Iliamna-Pile Bay	3	Transportation Corridor / Natural Gas Pipeline (crosses in two locations), Material Sites
RST 1641	Newhalen River Portage	1a	Natural Gas Pipeline

Note:
Project components cross the ROW in one location, unless otherwise noted
Source: ADNR 2019a

Section Line Easements

Section line easements are State-recognized easements for highway purposes that run along a surveyed section line of the rectangular survey system (11 Alaska Administrative Code [AAC] 51.025). Lands acquired by the State after March 26, 1951, including some lands in the project area, are subject to a section line easement that remains in existence unless vacated by proper authority. Easements are public ROWs that are 33, 50, 66, 83, or 100 feet wide. The State asserts that all 33- and 66-foot-wide section line easements were acquired under R.S. 2477, regardless

of whether trails have ever been developed along them. Section line easements are authorized by law and may be established when the rectangular survey of a section line occurs. Prior to survey, the State asserts the easements exist centered on the protracted section line; however, the easement must be surveyed before it can be used. Section line easements are used primarily for transportation. The project area would encompass several section line easements.

Alaska Native Claims Settlement Act Section 17(b) Easements

Under Section 17(b) of ANCSA, the US reserves linear access easements to public land and water on lands that have been or will be conveyed to Alaska Native Village and Regional corporations (ADNR 2013b). Easements can take the form of 60-foot-wide roads, 25- and 50-foot trails, or 1-acre site easements for vehicle parking, temporary camping, or loading/unloading. These easements are reserved to allow for public access through ANCSA lands to reach public lands and waterways. They do not authorize public access to the private land that the easement crosses (BLM 2009). The Bureau of Land Management (BLM) has management authority for the US for these easements unless that authority has been otherwise delegated.

ANCSA Section 17(b) easements have specific allowable uses that are stated in the conveyance document. They cannot be reserved or retained for recreational purposes, but can provide access to recreational opportunities on publicly owned land or for change in mode of transportation. Uses beyond those expressly granted should be approved by the property owner to avoid trespass issues between the user and the property owner.

Alternative 1a would cross three Section 17(b) easements (two would also be crossed by Alternative 1 or Alternative 3, and one is off the Iliamna-Newhalen Road). Alternative 1 would intersect one Section 17(b) easement on the southern shore of Iliamna Lake. Alternative 2 and Alternative 3 would intersect two Section 17(b) easements; both begin at the northern shore of Iliamna Lake and continue north (Table 3.2-3).

Table 3.2-3: ANCSA Section 17(b) Easements in the Project Area

ID	Description	Alternative(s)	Project Component
EIN 17b C5	Access trail east of the mouth of Gibraltar Creek on the southern shore of Iliamna Lake, south to public land (25-foot trail).	Alternative 1, Alternative 1a	Transportation Corridor, Natural Gas Pipeline
EIN 15f C5	Proposed access trail from EIN 15c on Eagle Bay on Iliamna Lake northerly to public lands (25-foot trail).	Alternative 2	Transportation Corridor, Natural Gas Pipeline
		Alternative 3, Alternative 1a	Transportation Corridor
EIN 30a C5 D1	Proposed access trail from EIN 30 on the western shore of an unnamed lagoon of Iliamna Lake (25-foot trail).	Alternative 2	Natural Gas Pipeline
		Alternative 3	Transportation Corridor, Natural Gas Pipeline
EIN 6b	Proposed access trail from Schoolhouse Lake west to the Iliamna-Newhalen Road (25-foot trail).	Alternative 1a	Natural Gas Pipeline

Notes:

Project components cross the easement in one location, unless otherwise noted.

ANCSA = Alaska Native Claims Settlement Act

Source: ADNR 1990; BLM 2019a

State Public Access Easements

Two 100- to 400-foot-wide State public access easements exist on State land along the project components. Under these easements, the State of Alaska reserved public access for current and future needs along the corridors, as well as authorization for trail improvements, trail maintenance, and safety cabins. The State public access easements in the project area are listed in Table 3.2-4. Alternative 1a, Alternative 2, and Alternative 3 cross ADL 230875 in one location, and two locations under Alternative 1. Under the Kokhanok East Ferry Terminal Variant, the pipeline would cross this easement in two locations, and the ferry route would cross it in three locations. Alternative 1a would cross at three locations, and the Alternative 2 ferry route would cross at seven to nine locations (depending on the route).

In Iliamna Lake, the pipeline would cross three times under Alternative 1a, and in two locations under Alternative 1 and the Kokhanok East Ferry Terminal Variant. The Alternative 2 and Alternative 3 pipeline would cross one time in Cook Inlet.

Table 3.2-4: State Public Access Easements in the Project Footprint

ID	Description	Alternative	Project Component(s)
ADL 230875	United Utilities, Inc. exclusive ROW for hybrid fiber-optic cable and microwave broadband communications network. In the project area, it would bisect in Iliamna Lake and Cook Inlet.	Alternative 1a Alternative 1 Alternative 2	Transportation Corridor (ferry route) ¹
		Alternative 1a Alternative 1 Alternative 2 Alternative 3	Natural Gas Pipeline (Cook Inlet and Iliamna Lake) ²
ADL 232949	Alaska Department of Transportation and Public Facilities design and construction ROW, central region.	Alternative 2, Alternative 3	Transportation Corridor, Natural Gas Pipeline

Notes:

ADL = Alaska Division of Lands

ROW = right-of-way

Project components cross the easement in one location, unless otherwise noted.

¹ Crosses in two locations under Alternative 1. Under the Kokhanok East Ferry Terminal Variant, the ferry route would cross in three locations. Alternative 2 ferry route would cross seven to nine times (depending on the route), and Alternative 1a would cross three times.

² In Iliamna Lake, the pipeline would cross in three locations under Alternative 1a, and in two locations under Alternative 1 and the Kokhanok East Ferry Terminal Variant. The Alternative 2 pipeline and Alternative 3 pipeline would cross one time in Cook Inlet.

Source: LM 2010; ADNR 2019a

3.2.2 Land Management

3.2.2.1 State Management

The Alaska Department of Natural Resources (ADNR), under AS 38.04.065 Land Use Planning and Classification and 11 AAC 55.010-.030, “shall, with local governmental and public involvement under AS 38.05.945, adopt, maintain, and, when appropriate, revise regional land use plans that provide for the use and management of State of Alaska-owned lands.” Plans applicable to the EIS analysis area include the Bristol Bay Area Plan (ADNR 2013a), the Nushagak and Mulchatna Rivers Recreation Management Plan (ADNR 2005), and the Kenai Area Plan (ADNR 2001).

All resource and land uses, including mining, fish and wildlife habitat, and recreation, are considered and evaluated under State management. Unless closed by the legislature, or a tract under 640 acres closed by administrative order, all State land is open for multiple uses. The State

of Alaska's Generally Allowed Uses on State Land provides a general explanation of the state's use management framework.

The transportation corridor (port access road) and natural gas pipeline under Alternative 1a and Alternative 1 would be within 1 mile (approximately 630 feet at its closest) of the boundary of (but would not occupy) the McNeil River State Game Refuge and Sanctuary, which is managed by the Alaska Department of Fish and Game (ADF&G) in accordance with the McNeil River State Game Refuge and Sanctuary Management Plan (ADF&G 2008a). Amakdedori port under Alternative 1a and Alternative 1 would be within 2 miles of the boundary of the McNeil River State Game Refuge and Sanctuary (see Section 3.5, Recreation, for more information about management in the refuge and sanctuary).

Bristol Bay Area Plan

The Bristol Bay Area Plan was the outgrowth of a cooperative federal-state land use planning process mandated by ANILCA. It was developed during the early 1980s, and was revised in 2005 to address the outstanding municipal entitlements of the three boroughs in the planning area (i.e., Bristol Bay, Lake and Peninsula, and Aleutians East); revise the tideland designations; address regional economic changes and changing land use patterns; and allow ADNR to lease portions of the area for oil and gas development.

The plan was substantially revised again in 2013 after litigation that focused on the concern of loss of protection to important habitat and recreation areas when much of the plan area was redesignated for general use. This revision was in response to an agreement with the plaintiffs in Nondalton Tribal Council et al. versus the State of Alaska, which dismissed the litigation in exchange for ADNR's agreement to address the issues raised in the lawsuit through the existing administrative process for amending area land use plans and reclassifying land.

The Bristol Bay Area Plan divides the Bristol Bay area into 20 regions with management units. The mine site would be in Region 6. The transportation corridor would be in regions 6, 8, and 10 under Alternative 1a; regions 6, 9, and 10 under Alternative 1; and regions 6, 8, and 9 under Alternative 2 and Alternative 3. At the mine site, Region 6 is designated for mineral development, among other uses; and managed to ensure that impacts to the anadromous and high-value resident fish streams are avoided, reduced, or mitigated as appropriate in the permitting processes. Additionally, impacts to moose wintering habitat will be taken into consideration during mine permit review, and the upper Koktuli River is also managed for recreation. Regions 8, 9, and 10 are managed for a variety of uses, including mineral exploration and development, public recreation and tourism, and protection of anadromous fish and wildlife resources and habitat. Region 8 is also managed for settlement. State-owned lands in these regions are identified to be retained in public ownership and managed for multiple use. The State selected much of the land in the planning area because of its mineral potential. Most of the area of the mine itself is designated with a primary use of mineral development. An additional goal for this region is for the State to provide support for mining by aiding in the development of infrastructure, such as ports and roads (ADNR 2013a). The plan retains all of the mineral closing orders (MCO), including MCO 393, which closes certain streams to mineral entry and development, and designates them habitat.

Iliamna Lake is managed under Region 9, co-designated under Public Recreation and Tourism-Dispersed and Habitat land designations. The navigable waters of this lake are to be managed so that its public recreation and habitat values are maintained. Development authorizations in these waters may be appropriate insofar as essential habitat and public recreation values are maintained. Authorizations in these waterbodies should not interfere with navigability, important habitat values, or recreational uses (ADNR 2013a).

Nushagak and Mulchatna Rivers Recreation Management Plan

The Nushagak and Mulchatna Rivers Recreation Management Plan is a component of the 2005 Bristol Bay Area Plan. This plan is continued as an element of the 2013 Bristol Bay Area Plan in the navigable waters of the Nushagak-Mulchatna drainage basin. In response to previous plans and to public concern about subsistence use and increased recreational use in the region, the ADNR, ADF&G, and the Bristol Bay Coastal Resource Service Area entered into a cooperative agreement to manage these rivers. No project components would be covered by the plan, but the mine site is approximately 20 miles upriver of units 16, 17, 18, and 19 of the plan. Units 16, 17, 18, and 19 are managed as primitive or semi-primitive, and some permanent and temporary facilities may be prohibited (ADNR 2005).

The Bristol Bay Area Plan includes goals that identify the need to manage land; protect fish, wildlife, and water; and provide a diversity of commercial and non-commercial public use opportunities. To meet goals in the Bristol Bay Area Plan, State land in the Nushagak and Mulchatna planning area is to be managed to provide a mix of commercial and non-commercial public use opportunities; ensure availability of public use sites to meet the needs of all users; protect habitat and other natural resources; and maintain options for future recreation management. Major streams in the Nushagak and Mulchatna drainage basin are in MCO 393.

Kenai Area Plan

The Kenai Area Plan divides the Cook Inlet area into 12 regions with management units. Amakdedori port and Diamond Point port would be in Region 12, and parts of the natural gas pipeline component for all alternatives would be in Region 7 and Region 12. State-owned lands in these regions are identified to be retained in public ownership and managed for multiple uses. The area around Amakdedori port is managed as habitat for bear spring feeding, moose, Dolly Varden, Arctic char, ducks, and geese. Cook Inlet waters at Amakdedori are managed for recreation. At Diamond Point, the project facilities would be on lands that are private or owned by Native corporations, but State lands and waters are designated in the plan for habitat and recreation. The plan has management guidelines for the development of transportation and utilities, which include cultural surveys, and protection of hydrologic systems and roads near wetlands. The plan also provides guidelines for waterfront development for soil erosion and fuel storage (ADNR 2001).

3.2.2.2 Borough Management

Lake and Peninsula Borough

The mine site, a portion of the natural gas pipeline, and much of the transportation corridor would be within the boundaries of the Lake and Peninsula Borough (LPB). The LPB, as a non-unified home-rule borough, is required to provide for planning, platting, and land use regulations on an area-wide basis (both inside and outside of cities) in the borough.

The LPB's planning commission was established to perform the area-wide functions of planning, platting, and zoning; their recommendations are then transmitted to the LPB assembly, which sets policy and exercises legislative power in the borough (LPB no date). The commission prepares and revises the LPB Comprehensive Plan (LPB 2012). The LPB Comprehensive Plan provides general goals and policy recommendations to address pressing issues in the region.

The plan includes the following strategies for planning for wise land use and environmental protection: periodically review (and if appropriate improve) enforceable development standards (e.g., stream setbacks), and periodically review (and if appropriate, improve) the LPB's large-project review process. Unlike some comprehensive plans, it does not make land use

regulations, but is linked to community action plans for each of the LPB's communities, including those in the EIS analysis area. In addition to the LPB Comprehensive Plan, the LPB has prepared Village Strategic Plans for the following communities: Port Alsworth, Nondalton, Newhalen, Pedro Bay, Kokhanok, and Levelock. These brief plans outline core values, an envisioned future, and strategic direction for the period from 2017 to 2022.

LPB permits include Chapter 9.07, Development Permit, and Chapter 9.08, Large Project Permits of the LPB code, and have requirements that apply to local approval of the Pebble Project. Chapter 9.08 requires that the project comply with socioeconomic and fiscal impact criteria that are outlined in the ordinance. These include activities within 100 feet of an anadromous stream; reclamation plans; and socioeconomic and fiscal impact reports.

Kenai Peninsula Borough

A portion of the natural gas pipeline under all alternatives would be in the Kenai Peninsula Borough (KPB). The Amakdedori and Diamond Point ports and the port access roads or the north access road would also be in KPB boundaries. As a second-class borough, the KPB is required to provide for planning, platting, and land use regulations on an area-wide basis (both inside and outside of cities) in the borough in accordance with AS 29.40. Land use in the KPB is guided by the KPB Comprehensive Plan (KPB 2005, 2017). The Code of Ordinances dictates the KPB's powers and operations.

Zoning in the KPB is unrestricted outside of the KPB's cities and Local Option Zone Districts, none of which are in the EIS analysis area. However, the KPB does regulate floodplain development, and development near certain anadromous fish streams throughout the borough, including Amakdedori Creek, near the port site. Such activities may require a permit from the KPB.

The KPB Comprehensive Plan recognizes the borough's proximity to the project, and acknowledges that project infrastructure would be located in the borough, although the plan does not contain goals, objectives, or implementation actions specific to project development on lands in the KPB.

3.2.2.3 Alaska Native Regional and Village Corporations

In 1971, ANCSA was signed into law. Under ANCSA, aboriginal land claims were settled in exchange for \$962.5 million in compensation, as well as approximately 40 million acres of land (Norris 2002). ANCSA established 12 for-profit Alaska Native regional corporations and 225 Alaska Native village corporations to administer the settlement lands and compensation funds. A 13th regional corporation was later added for Alaska Natives living outside the state. Alaska Natives enrolled as shareholders in the village and regional corporations where they lived at the time of enactment. The regional and village corporations land entitlement was generally proportionate to the population of these corporations at the time of enrollment. In most cases, the surface estate is owned by the village corporations, with the subsurface estate owned by the associated regional corporations.

Alaska Native corporation land is often held in large tracts and used for subsistence purposes, or developed/sold to generate revenue. Alaska Native corporation-owned lands in the transportation corridors and natural gas pipeline corridors consist of parcels with surface and subsurface rights owned by the Bristol Bay Native Corporation and Cook Inlet Region, Inc. (CIRI), and surface rights owned by various village corporations. Complete ownership for all alternatives is listed above in Table 3.2-1.

As private land, uses on land owned by Alaska Native village and regional corporations are subject to approvals of the surface and subsurface landowners. In the past, there have been

conflicts over what is defined as surface and subsurface rights and the need for landowner approval; these are primarily resolved on a case-by-case basis, either through negotiations or in the court system. The Bristol Bay Native Corporation (BBNC) manages their lands to uphold three primary values (i.e., fiscal, environmental, and social) in order to protect the fish that have sustained the culture of the people throughout history (BBNC 2018). Some of the project components under Alternative 2 and Alternative 3 would be on CIRI property. CIRI manages their lands to strike a balance between sustainably developing resources to improve opportunities for shareholders, and protecting the land for future generations (CIRI 2018). Parts of the port access road under Alternative 1a and Alternative 1 would be on Alaska Peninsula Corporation property, including where the transportation corridor would cross the Gibraltar River. The Alaska Peninsula Corporation's mission is "to preserve and enhance the quality of life of Alaska Peninsula Corporation shareholders and to protect our culture while managing our assets in a manner which enhances their value" (APC 2018). Village corporation missions often include protection for the natural and cultural environment, and allowance of some development. Parts of the mine access road and pipeline corridor under Alternative 2 and Alternative 3 would be on lands owned by Pedro Bay Village Corporation, who manages its land for balancing economic purposes with subsistence use, archaeological research, and historic preservation. The corporation allows some permitted use. Parts of the mine access road under Alternative 1a, Alternative 2, and Alternative 3 would be on Iliamna Natives Limited property, including where the transportation corridor would cross the Newhalen River. The transportation corridor for Alternative 2 and Alternative 3 would cross lands owned by Salmatof Native Association, Inc., Seldovia Native Association, Inc., and Tyonek Native Corporation.

There is a conservation easement, made in agreement with Pedro Bay Village Corporation and Iliamna Village Corporation, and held and enforced by the Bristol Bay Heritage Land Trust, encompassing a majority of the islands at the northern end of Iliamna Lake, with the intent to protect freshwater seals (BBHLT 2012). The easement would prevent development on those islands, but would not prevent the passage of vessels in the vicinity.

Any private landowners have rights associated with the title to the real estate, including the exclusion of others from entering property.

3.2.2.4 Native Allotments

Native Allotments issued under the 1906 Native Allotment Act are parcels of land up to 160 acres, which are owned by an individual. The lands are held in trust by the federal government and generally require the Bureau of Indian Affairs (BIA) oversight for sales, gift deeds, leases, permits, partitions, ROWs, and sand and gravel leases. Alternative 2 and Alternative 3 would bisect Native Allotments, two of which are under BIA oversight.

3.2.2.5 Federal Management

The project footprint for any of the alternatives would not intersect with federal land. Under Alternative 1, the mine access road and natural gas pipeline corridor would be within 3 miles of Lake Clark National Park and Preserve. Under Alternative 1a and Alternative 1, the port access road would be within 8 miles of Katmai National Park and Preserve, and more than 20 miles from Alagnak Wild River. The natural gas pipeline corridor would pass near a portion of the Alaska Maritime National Wildlife Refuge and the Kachemak Bay National Estuarine Research Reserve (NERR). The mine and port access roads would be within 1 mile of lands selected by the State and managed by BLM.

Under Alternative 1a, Alternative 2, and Alternative 3, the transportation corridor and natural gas pipeline would be within 3 miles of the Lake Clark park unit, and within about 1 mile of lands

selected by the State or Native corporations and managed by BLM. The natural gas pipeline corridor would pass approximately 7 miles from a portion of the Alaska Maritime National Wildlife Refuge (all alternatives), and within 4 miles of the boundary of the Kachemak Bay NERR.

Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement

The Submerged Lands Act grants individual states rights to the natural resources of submerged lands from the coastline of Alaska to 3 nautical miles offshore. The act also reaffirmed the federal claim to the lands of the Outer Continental Shelf (OCS), which consists of those submerged lands seaward of State jurisdiction. The act led to the passage of the Outer Continental Shelf Lands Act, which outlines the federal responsibility over the submerged lands of the OCS. The Bureau of Ocean Energy Management in Alaska has management authority over the development of oil, natural gas, renewable energy, and mineral resources on Alaska's OCS. The Bureau of Safety and Environmental Enforcement (BSEE) oversees safety, environmental protection, and conservation of resources related to the exploration for and development of offshore resources on the OCS. The agency ensures that offshore energy operations comply with applicable environmental regulations; develops and enforces standards and regulations to enhance operational safety and environmental protection; and refines regulations while maintaining safety. BSEE authorization is required for the ROW encompassing the natural gas pipeline between the Kenai Peninsula and the port facility for all alternatives for the portion of the ROW that would be on the OCS of Cook Inlet.

National Park Service

The National Park Service (NPS) manages the Lake Clark and Katmai park units, and as well as the Alagnak Wild River. The transportation corridor and the mine site components would occur in the vicinity of (but not on) these lands. The boundary of Lake Clark Preserve would be approximately 15 miles northeast of the mine site, and 3 miles from Alternative 1a and Alternative 2 and Alternative 3 mine access road at the closest point. These project components would therefore not be subject to the NPS's land management jurisdiction. However, as a stakeholder in the immediate vicinity, NPS is concerned about impacts to its managed resources (see Section 3.5, Recreation, for more information about management in each NPS unit).

US Fish and Wildlife Service

The US Fish and Wildlife Service (USFWS) manages the Alaska Maritime National Wildlife Refuge, which encompasses several small islands on the west coast of Cook Inlet, including Kamishak Bay, Cottonwood Bay, Iliamna Bay, and Iniskin Bay. Some islands in the refuge would be within 10 miles of the natural gas pipeline corridor for all alternatives. There would be refuge islands within 20 miles of the Amakdedori port site and within 3,200 feet of Diamond Point (900 feet from the nearest dredge area). Augustine Island, which is part of the refuge, would be 2.25 miles from the alternative lightering station for all alternatives, and the lightering station under Alternative 2 and Alternative 3 would be 2,800 feet from the nearest refuge island. The pipeline crossing in Cottonwood Bay under Alternative 2 and Alternative 3 would be 250 feet from the nearest refuge island. These project components would not be subject to USFWS's land management jurisdiction, because the project components would be near (but not on) USFWS land (see Section 3.5, Recreation, for more information about management in the refuge).

Bureau of Land Management

All alternatives would have a facility within 1 mile of (but not on) BLM-managed lands. The project would therefore not be subject to BLM's land management jurisdiction. The project alternatives would cross one or more ANCSA Section 17(b) easement(s), discussed above.

National Oceanic and Atmospheric Administration

The Kachemak Bay NERR is a state/federal partnership with the University of Alaska and the National Oceanic and Atmospheric Administration (NOAA); it was designated to promote informed management of the nation's estuaries and coastal habitats (KBNERR 2011, 2016). The pipeline compressor station would be approximately 4 miles from the reserve, and would therefore not be subject to the NOAA land management jurisdiction.

3.2.2.6 Local Management

Some communities in the project area have developed community plans, including comprehensive, capital improvement, land use, strategic, transportation, vision, and other planning documents. Such planning exercises determine community goals, objectives, and management strategies for enacting public policy on transportation, utilities, land use, recreation, housing, and other topics of importance to the community. In the case of all potentially affected communities, local management plans provide guidance, but planning and permitting decision making is exercised at the borough level. No physical, project-related infrastructure would be developed on lands that are in local jurisdiction, but indirect effects could occur from management of some resources (such as water quality or air quality) on adjacent lands.

3.2.3 Land Use

The prevalent land uses around the EIS analysis area are fish and wildlife habitat, subsistence, and low-intensity recreational activities, which do not require developed facilities. Land development in the Bristol Bay area is generally limited to the areas in and around geographically isolated communities, fish processing facilities, and small fishing and hunting lodges. Developments include roads, airstrips, and docks. Temporary use associated with mineral exploration activities has occurred in specific portions of the project area.

Residential and commercial land use in the vicinity of the mine site is limited, and includes the communities of Newhalen (population 214), Nondalton (population 129), and Iliamna (population 102), each approximately 17 miles from the mine site. Use around the transportation corridor, including crossings of the Newhalen and Gibraltar rivers, is also limited and includes the community of Kokhanok (population 168), approximately 2 miles from the Alternative 1a and Alternative 1 port access road; the community of Iguigig (population 52), approximately 35 miles from the Alternative 1a and Alternative 1 port access road; or the community of Pedro Bay (population 33), within 1 mile of the Alternative 3 transportation corridor. Many residents practice a lifestyle reliant on subsistence activities, and sport and commercial hunting, fishing, wildlife viewing, and boating also occurs in the area (ADCCED 2018b) (see Section 3.5, Recreation; Section 3.6, Commercial and Recreational Fisheries; and Section 3.9, Subsistence, for additional details). There are additional mining claims near the project area filed by Northern Dynasty Minerals and other mining exploration firms. Some claims have been relinquished, while others remain active for the purposes of exploration.

Iliamna Lake is used for recreational activities, sport fishing, and subsistence activities, including fishing and seal hunting. The lake is also heavily used for transportation via boat in open water, or via snowmachine when there is sufficient ice cover.

The Amakdedori port site is used for some subsistence activity, and cultural education for nearby communities. The Diamond Point port site is used for resource extraction. The transportation corridor under Alternative 2 and Alternative 3 includes the Williamsport-Pile Bay Road, which is used for the portage of fishing boats and some cargo from Cook Inlet to the region's communities and the Bristol Bay fishery.

On the Kenai Peninsula, there is a higher use of the land for recreation, as well as scattered residential and commercial development along the Sterling Highway, where the natural gas pipeline component would cross. The highway is traveled in all seasons, but sees particularly high use in the summer, when recreational and tourism activities increase. Where the natural gas pipeline corridor would cross Cook Inlet, the water is used for transportation, barging, boating, commercial fishing, recreational and subsistence fishing, and sightseeing, and provides habitat for fish and wildlife.