




## **Draft Resource Report 8 – Rev 0** **Land Use, Recreation, and Aesthetics**

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	ALASKA PIPELINE PROJECT DRAFT RESOURCE REPORT 8 LAND USE, RECREATION, AND AESTHETICS	USAG-UR-SGREG-000011 DECEMBER 2011 REVISION 0
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Notes:

Yellow highlighting is used throughout this draft resource report to highlight selected information that is pending or subject to change in the final report.

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## ACRONYMS AND ABBREVIATIONS

§	Section
ACEC	Areas of Critical Environmental Concern
ADEC	Alaska Department of Environmental Conservation
ADFG	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
ADOTPF	Alaska Department of Transportation and Public Facilities
AFB	Air Force Base
AMP	Alaska Mainline milepost
ANCSA	Alaska Native Claims Settlement Act
ANILCA	Alaska National Interest Lands Conservation Act
APP	Alaska Pipeline Project
AS	Alaska Statute
ASRC	Arctic Slope Regional Corporation
ATWS	Additional Temporary Work Space
BLM	U.S. Bureau of Land Management
BOEM	Bureau of Ocean Energy Management
BPXA	BP Exploration Alaska
BTEX	Benzene, toluene, ethylbenzene, and xylene
CAMA	Central Arctic Management Area
CCP	Comprehensive Conservation Plan
C.F.R.	Code of Federal Regulations
CGF	Central Gas Facility
COE	U.S. Army Corps of Engineers
CSD	Contaminated Sites Database
DH	Dock Head
DMLW	Alaska Department of Natural Resources, Division of Mining, Land and Water
DOD	U.S. Department of Defense
DRO	diesel range organics
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
FHA	Federal Highway Administration
FUDS	Formerly Used Defense Sites
FWS	U.S. Fish and Wildlife Service
GMUs	Game Management Units
GRO	gasoline range organics
GTP	Gas Treatment Plant
LMR	Land Management Regulation
LUST	Leaking Underground Storage Tank
MLBV	mainline block valve
MP	Milepost
N/A	not applicable
NOAA	National Oceanic and Atmospheric Administration
NPL	National Priorities List
NWR	National Wildlife Refuge
ONA	Outstanding Natural Area

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PBU	Prudhoe Bay Unit
PMP	Point Thomson Gas Transmission Pipeline milepost
PT Pipeline	Point Thomson Gas Transmission Pipeline
PTU	Point Thomson Unit
Put-23	Putuligayuk-23
RCRA	Resource Conservation and Recovery Act
RMA	Recreation Management Area
RMP	Resource Management Plan
RNA	Research Natural Area
RS	Revised Statute
SVOC	semi-volatile organic compound
T/A	tentatively assigned
TAPS	Trans-Alaska Pipeline System
TVSF	Tanana Valley State Forest
VOC	Volatile organic compound
VRM	Visual Resource Management

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## 8.0 RESOURCE REPORT 8 – LAND USE, RECREATION, AND AESTHETICS

The location information, facility descriptions, resource data, construction methods, and mitigation measures presented in this report are preliminary and subject to change. APP is conducting engineering studies, environmental resource surveys, agency consultations, and stakeholder outreach efforts to further refine and define the details of the Project.

The Project described in this resource report is being designed and developed based on estimated volumes of natural gas from projected shipper commitments. If final shipper commitments are significantly different from those estimated, the Project may be adjusted accordingly.

### 8.1 INTRODUCTION

TransCanada Alaska Company, LLC and Foothills Pipe Lines Ltd., working with ExxonMobil Alaska Midstream Gas Investments LLC, are developing a joint project to treat, transport, and deliver natural gas from the Alaska North Slope (ANS) to pipeline facilities in Alberta, Canada for markets in the contiguous United States and North America. This joint project is referred to as the Alaska Pipeline Project (APP or Project)<sup>1</sup>.

As required by Title 18 Code of Federal Regulations (C.F.R.) Section (§) 380.12 and consistent with the Alaska Natural Gas Pipeline Act of 2004 (ANGPA), APP has prepared this draft resource report in support of its application to the U.S. Federal Energy Regulatory Commission (FERC) for a Certificate of Public Convenience and Necessity (CPCN) under Section 7(c) of the Natural Gas Act (NGA) to construct, own, and operate the portion of the Project in Alaska. This draft resource report pertains only to that portion of the Project in Alaska, and unless the context otherwise requires, references in this draft resource report to APP refer only to the Alaska portion of the Project<sup>2</sup>.

As shown in Figure 1.1-1 of Resource Report 1, APP will comprise the following major components<sup>3,4</sup>:

- The Point Thomson Gas Transmission Pipeline (PT Pipeline)<sup>5</sup>, consisting of approximately 58.4 miles of buried 32-inch-diameter pipeline from the Point Thomson Unit (PTU) to an APP Gas Treatment Plant (GTP) and associated facilities near Prudhoe Bay;

<sup>1</sup> Depending on the context, the term APP refers to the joint project or, collectively, to the sponsoring entities.


<sup>2</sup> The Canadian Section refers to the portion of the Project from the Yukon border to the pipeline facilities in Alberta, Canada.

<sup>3</sup> In previous FERC filings, the Point Thomson Gas Transmission Pipeline was referred to as Zone 1, the Gas Treatment Plant was referred to as Zone 2, and the Alaska Mainline was referred to as Zone 3 of the Alaska-Canada Pipeline.

<sup>4</sup> As part of the Project, APP proposes to construct compressor stations, meter stations, various mainline block valves (MLBV), pig launcher and receiver facilities, as well as associated ancillary and auxiliary infrastructure, including additional temporary workspace, access roads, helipads, construction camps, pipe storage areas, contractor yards, borrow sites, and dock modifications at Prudhoe Bay.

<sup>5</sup> The origin of the PT Pipeline is assumed to be located at an outlet from the PTU. The final length may vary depending on the final gas development plan for the PTU.



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- The GTP, which will have the capacity to process gas received from the Point Thomson Unit and the existing Central Gas Facility (CGF) on the Prudhoe Bay Unit (PBU) in order to deliver an annual average capacity up to 4.5 billion standard cubic feet per day (bscfd) (standard conditions: 14.73 pounds per square inch absolute and 60° Fahrenheit) of sales quality gas; and
- The Alaska Mainline, consisting of approximately 745.1 miles of 48-inch-diameter pipeline, all of which is buried except as otherwise described in this Resource Report. The Alaska Mainline extends from the GTP to the Alaska-Yukon border east of Tok, Alaska, and includes provisions for intermediate gas delivery points within Alaska.

Table 8.1-1 lists the FERC's filing requirements and additional information applicable to Resource Report 8 taken from FERC's Guidance Manual for Environmental Report Preparation:

TABLE 8.1-1 Alaska Pipeline Project Resource Report 8 Filing Requirements Checklist	
Requirement	Where Found in Document
FERC REQUIREMENTS FROM 18 C.F.R. SECTION (§) 380.12	
1. Classify and quantify land use affected by: (§ 380.12[j][1] & [2]) <ul style="list-style-type: none"> <li>• Pipeline construction and permanent rights-of-way (§ 380.12[j][1]);</li> <li>• Extra work/staging areas (§ 380.12[j][1]);</li> <li>• Access roads (§ 380.12[j][1]);</li> <li>• Pipe and contractor yards (§ 380.12[j][1]); and</li> <li>• Aboveground Facilities (§ 380.12[j][1]).</li> </ul> For Aboveground Facilities provide the acreage affected by construction and operation, acreage leased or purchased, and describe the use of the land not required for operation.	Section 8.2, and Appendices 8A, 8B, and 8C
2. Identify by milepost (MP) all locations where the pipeline right-of-way would at least partially coincide with an existing right-of-way, where it would be adjacent to existing rights-of-way, and where it would be outside of existing right-of-way. (§ 380.12[j][1]) <ul style="list-style-type: none"> <li>• This may apply to offshore as well.</li> </ul>	Appendix 1C of Resource Report 1
3. Provide detailed typical construction right-of-way cross-section diagrams showing information such as widths and relative locations of existing rights-of-way, new permanent right-of-way, and temporary construction right-of-way. (§ 380.12[j][1])	Appendix 1E of Resource Report 1
4. Summarize the total acreage of land affected by construction and operation of the project. (§ 380.12[j][1]) <ul style="list-style-type: none"> <li>• This applies to the offshore as well.</li> </ul>	Sections 8.2, 8.4.1.7, and 8.4.2.6, and Appendices 8A, 8B, and 8C
5. Identify by MP all planned residential or commercial/business development and the timeframe for construction. (§ 380.12[j][3]) <ul style="list-style-type: none"> <li>• Identify all planned development crossed or within 0.25 mile of proposed facilities.</li> </ul>	Section 8.3
6. Identify by MP special land uses (e.g., maple sugar stands, specialty crops, natural areas, national and state forests, conservation land, etc.). (§ 380.12[j][4]) <ul style="list-style-type: none"> <li>• This applies to the offshore as well, where it may include oyster and other shellfish beds, special anchoring or lightering areas, and shipping lanes.</li> </ul>	Sections 8.4 and 8.5
7. Identify by beginning MP and length of crossing all land administered by federal, state, or local agencies, or private conservation organizations. (§ 380.12[j][4]) <ul style="list-style-type: none"> <li>• This applies to the offshore as well.</li> </ul>	Section 8.4 and Appendix 8A
8. Identify by MP all natural, recreational, or scenic areas and all registered natural landmarks crossed by the project. (§ 380.12[j][4&6]) <ul style="list-style-type: none"> <li>• This applies to the offshore as well.</li> <li>• Identify areas within 0.25 mile of any proposed facility.</li> </ul>	Sections 8.4 and 8.5


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TABLE 8.1-1  Alaska Pipeline Project Resource Report 8 Filing Requirements Checklist		
9. Identify all facilities that would be within designated coastal zone management areas. Provide a consistency determination or evidence that a request for a consistency determination has been filed with the appropriate state agency. (§ 380.12[j](4&7))		Section 8.4.3
10. Identify by MP all residences that would be within 50 feet of the construction right-of-way or extra work area. (§ 380.12[j](5))		Section 8.2.2
11. Identify all designated or proposed candidate national or state Wild and Scenic Rivers crossed by the project. (§ 380.12[j](6))		Section 8.5.
12. Describe any measures to visually screen Aboveground Facilities, such as compressor stations. (§ 380.12[j](11))		Section 8.8.3.2
13. Demonstrate that applications for rights-of-way or other proposed land use have been or soon will be filed with federal land-managing agencies with jurisdiction over land that would be affected by the project. (§ 380.12[j](12))		Table 1.11-1 in Resource Report 1
OTHER INFORMATION OFTEN MISSING AND RESULTING IN DATA REQUESTS PER FERC'S GUIDANCE MANUAL FOR ENVIRONMENTAL REPORT PREPARATION		
• Identify all buildings within 50 feet of the construction right-of-way or extra work areas.		Section 8.2.2
• Describe the management and use of all public lands that would be crossed.		Sections 8.4 and 8.5
• Provide a list of landowners by MP or tract number that corresponds to information on alignment sheets.		Appendix 8A
• Provide a site-specific construction plan for residences within 50 feet of construction.		Section 8.2

Mileposts (MPs) are commonly used markers along linear projects, such as APP. Where necessary to distinguish the PT Pipeline from the Alaska Mainline, APP has prefixed its MP identifier with a PT Pipeline MP (PMP) or an Alaska Mainline MP (AMP). This convention is used in APP's application and supporting maps and alignment sheets (refer to Appendix 1O of Resource Report 1) to identify resources and features along the respective pipeline routes.

The purpose of this resource report is to describe the land ownership, land uses, recreational resources, and aesthetic resources crossed by the Project or that are in the Project area<sup>6</sup>, and the potential impacts and mitigation measures that will be implemented to reduce impacts on these resources.


## 8.2 EXISTING LAND USE AND LAND OWNERSHIP

### 8.2.1 EXISTING LAND USE CATEGORIES

Land use types within the Project area were classified to reflect Alaska's unique land characteristics. Classifications were based on publically available information from the Alaska Department of Natural Resources (ADNR), the U.S. Bureau of Land Management (BLM), and municipal databases (e.g., Fairbanks North Star Borough), and a review of aerial photography. APP has defined six primary land use types affected by the Project, which are summarized as follows, and include a dedicated pipeline facility corridor.

- Open land consists of areas dominated by non-forested lands, maintained utility rights-of-way, emergent and shrub-scrub wetlands, and tundra. More detailed descriptions of wetland impacts are discussed in Section 2.4 of Resource Report 2. More detailed

<sup>6</sup> The terms "Project area" and "Project footprint" are defined to include the project facilities and land requirements for construction and operation. The term "Project vicinity" is used to mean the area or region near or surrounding the Project area, and is subject to the context in which the term is used.


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descriptions of specific vegetation types and their locations are described in Section 3.3 of Resource Report 3.

- Forest land consists of upland or wetland forest, undeveloped trees and grassland, and forested open land. More detailed descriptions of wetland impacts are discussed in Section 2.4 of Resource Report 2. More detailed descriptions of specific vegetation types, including forest lands and their locations, are described in Section 3.3 of Resource Report 3.
- Agricultural land consists of actively cultivated land or land designated for agricultural use.
- Commercial/industrial land consists of power or utility stations, manufacturing or industrial plants, commercial or retail facilities, roads, military restricted areas, and oil and gas development.
- Residential land consists of yards, subdivisions, mobile home parks, planned developments, and private lands.
- Open water consists of waterbody crossings greater than 100 feet, flood control, and waterways (e.g., ponds, embayments, coastal waters). More detailed descriptions of specific waterbodies and their locations are described in Resource Report 2.

Public Land Order 5250 of December 1971 established the BLM utility corridor. The primary management direction and use of this corridor is for energy transportation (BLM 1991). APP has sited the Project within this utility corridor and on federal and state-owned lands to the greatest extent practicable. As discussed in Section 8.4, the Project is located within the corridor between approximate AMPs 61.5 and 367.7.

The following sections describe the locations and existing land use at each of the Project facilities. Potential temporary and permanent impacts to lands in the Project area are discussed in Sections 8.4 through 8.8.

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### 8.2.2 PIPELINE FACILITIES

As shown in Table 8.2.2-1, the PT Pipeline route will only cross commercial/industrial land, and the Alaska Mainline route will mainly cross open land.

TABLE 8.2.2-1							
Alaska Pipeline Project Summary of Land Uses Crossed by the Pipeline Facilities (in miles) <sup>a, b</sup>							
Segment/Borough or Census Area	Open	Forest	Agriculture	Commercial/ Industrial	Residential	Open Water	Total
POINT THOMSON GAS TRANSMISSION PIPELINE							
North Slope Borough	0.0	0.0	0.0	58.4	0.0	0.0	58.4
PT Pipeline Subtotal	0.0	0.0	0.0	58.4	0.0	0.0	58.4
ALASKA MAINLINE							
North Slope Borough	173.9	0.0	0.0	11.3	0.0	0.0	185.2
Yukon-Koyukuk Census Area	241.5	0.0	0.0	2.7	0.6	0.2	245.0
Fairbanks North Star Borough	52.4	19.5	0.0	15.0	0.0	1.1	88.0
Southeast Fairbanks Census Area	184.0	11.9	17.8	5.8	7.4	0.0	226.9
Alaska Mainline Subtotal	651.8	31.4	17.8	34.8	8.0	1.3	745.1
PROJECT TOTAL	659.6	31.4	17.8	85.4	8.0	1.4	803.5
<sup>a</sup> The numbers in this table have been rounded for presentation purposes. As a result, the totals may not reflect the exact sum of the addends in all cases.							
<sup>b</sup> Refer to Section 8.2 for a definition of land uses associated with the Project.							

Table 8.2.2-2 summarizes the land use requirements in acres by land use classification for construction and operation of the PT Pipeline and Alaska Mainline. As noted in Table 8.2.2-2, the Pipeline Facilities<sup>7</sup> will occupy 16,990.5 acres during construction and 9,708.9 acres during operation. Alaska contains over 663,000 square miles of land, while the Pipeline Facilities will require use of 26.5 square miles during construction and 15.2 square miles during operations (far less than 1 percent of the state's total land area). Table 8A-1 of Appendix 8A provides land use type and land ownership by MP.

The following describes the typical characteristics associated with each land use category in the Project area. This includes the dominant land cover type (e.g., vegetation), use, and/or setting and, where applicable, includes subsections discussing more specific land uses within each category (e.g., specialty crops within the agricultural land use type). Also, some federally and state-managed lands have management objectives associated with them and, therefore, a brief discussion is also included, where applicable.

<sup>7</sup> The Pipeline Facilities will consist of the PT Pipeline and the Alaska Mainline, as discussed in Section 1.3.1 of Resource Report 1.

TABLE 8.2.2-2

**Alaska Pipeline Project**  
**Land Uses Types Occupied by Pipeline Facilities during Construction and Operations (in approximate acres)**<sup>a, b</sup>


[Note: APP is developing land use classifications and conducting title searches for land ownership. Therefore, the land use types may change based on the unique characteristics of the State of Alaska. Final land use classifications will be provided with the final report. Further, the totals represented in the table may differ from Resource Report 1 due to available data sources used to classify land use types and will be updated or revised in the final report.]

Segment/Borough or Census Area/Facility	Open		Forest		Agriculture		Commercial/ Industrial		Residential		Open Water		Total	
	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.
<b>POINT THOMSON GAS TRANSMISSION PIPELINE</b>														
North Slope Borough	0.0	0.0	0.0	0.0	0.0	0.0	1	7	0.0	0.0	0.0	0.0	1,395.9	707.9
PT Pipeline Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	1,395.9	707.9	0.0	0.0	0.0	0.0	1,395.9	707.9
<b>ALASKA MAINLINE</b>														
North Slope Borough	3,684.4	2,105.3	0.0	0.0	0.0	0.0	240.5	137.5	0.0	0.0	0.0	0.0	3,924.8	2,242.8
Yukon-Koyukuk Census Area	5,096.5	2,912.5	0.0	0.0	0.0	0.0	58.0	33.1	12.0	6.9	4.9	2.8	5,171.4	2,955.4
Fairbanks North Star Borough	1,091.7	622.9	404.4	232.0	0.0	0.0	317.4	181.5	0.1	0.0	34.9	19.4	1,848.5	1,055.7
Southeast Fairbanks Census Area	3,922.4	2,244.8	270.2	154.3	384.9	213.4	102.7	62.4	126.8	72.4	0.0	0.0	4,807.0	2,747.2
Alaska Mainline Subtotal	13,795.0	7,885.5	674.6	386.3	384.9	213.4	718.6	414.5	138.9	79.3	39.8	22.2	15,751.7	9,001.1
<b>PROJECT TOTAL<sup>d</sup></b>	<b>13,960.5</b>	<b>7,980.0</b>	<b>674.6</b>	<b>386.3</b>	<b>384.9</b>	<b>213.4</b>	<b>1,791.9</b>	<b>1,027.8</b>	<b>138.9</b>	<b>79.3</b>	<b>39.8</b>	<b>22.2</b>	<b>16,990.5</b>	<b>9,708.9</b>

<sup>a</sup> The numbers in this table have been rounded for presentation purposes. As a result, the totals may not reflect the exact sum of the addends in all cases.

<sup>b</sup> Pipeline right-of-way construction impacts are based on a 175-foot-wide temporary right-of-way. Operational impacts are based on a 100-foot-wide permanent right-of-way.



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### 8.2.2.1 Open Land

Open land associated with the Project area consists of areas dominated by non-forested lands, maintained utility rights-of-way, emergent and shrub-scrub wetlands, and tundra. With the exception of maintained utility rights-of-way, open land is generally not used for any specific purpose, although most areas are available for recreational opportunities. Open land is the predominant land use type affected by the Pipeline Facilities, as listed in Tables 8.2.2-1 and 8.2.2-2.

As discussed in Resource Report 1, Pipeline Facilities will generally be collocated with (within 500 feet from) existing utility or road rights-of-way for the following distances:

- The PT Pipeline is generally collocated with existing rights-of-way for approximately 14.2 miles (24 percent) (refer to Table 1.1.3-2); and
- The Alaska Mainline is generally collocated with existing rights-of-way, including highways, for 518.8 miles (70 percent) (refer to Table 1.1.3-3).

The discussion of the locations and reasons where it is not practicable to collocate in existing rights-of-way is found in Section 1.3.1.2 in Resource Report 1.

Non-forested open lands are dominated by emergent and shrub-scrub wetlands and herbaceous vegetation, tundra, and meadows as described in Section 2.4 of Resource Report 2 and Section 3.3 of Resource Report 3, respectively.


### 8.2.2.2 Forested Lands

In general, forested lands occur predominately in the southern part of the Project area, in the Fairbanks North Star Borough and Southeast Fairbanks Census Area. Tables 8.2.2-1 and 8.2.2-2 summarize the forested lands occupied by the Pipeline Facilities (in acres) by borough and census area. The Project may be required to salvage forest resources for public use during the clearing of the right-of-way. APP will consult with the appropriate state and federal agencies described below to develop specific measures to address the disposition of timber cleared from the Project area.

#### Federal Lands

There are federally-owned forested lands in the Project area managed by BLM and U.S. Department of Defense (DOD). On BLM lands within the established utility corridor (BLM 1991), forest resources are limited to areas south of the Brooks Range and commercial harvesting of timber does not occur. However, harvest of timber resources in the utility corridor for salvage purposes, such as right-of-way clearing, is allowed, and use of timber resources for firewood or house logs, is allowed on a case-by-case basis. Forest management within the BLM Fortymile management area is tied to making firewood available to the public at fair market value (BLM 1980). While Fortymile Resource Management Plan also recommends conducting an inventory of forest resources to facilitate the decision-making process for disposition of the forest resources on a large-scale basis, no inventory has been conducted (BLM 1980). Land management plans associated with BLM lands are discussed further in Section 8.4.1.

BLM-managed properties and DOD lands are managed according to BLM timber management practices and state-specific forest practice regulations (see below). The DOD's Resource Management Plan (RMP)/Environmental Impact Statement (EIS) also discusses the development of a forest management plan on DOD lands to determine the harvest opportunities

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available and the sustained allowable cut of timber and fuel wood (BLM 1995). Land management plans associated with DOD lands are discussed further in Section 8.4.1.

### State Lands

Where the Project is located on State of Alaska-owned lands within the Tanana Basin Area, timber salvage activities associated with a utility corridor must meet the requirements of Alaska Statute (AS) 41.17.083, which states: “A state agency, municipality, or public utility shall determine whether the timber to be removed has significant salvage value before approving or conducting clearing of forest land for purposes other than timber harvest. If the timber has significant salvage value, the agency or utility shall salvage the timber as part of the clearing process.”

Per the Tanana Basin Area Plan (ADNR 1991) (discussed further in Section 8.4.2), forest management must comply with the Forest Resources and Practices Act (AS 41.17) and its implementing regulations (11 Alaska Administrative Code [AAC] 95). Guidelines for compliance include: Division of Forestry review of proposals for significant land clearing actions; scheduling projects to allow for salvage of timber; evaluating the value of timber as a public resource; and delineating uncleared areas.

The APP will also cross the Tanana Valley State Forest (TVSF), which is owned by the State of Alaska and managed by ADNR, Division of Forestry. Specific areas managed for timber production within the TVSF are discussed in Section 8.4.2.

#### 8.2.2.3 Agricultural Land


In general, agricultural land is defined as actively cultivated or designated for agricultural use, and it occurs exclusively in the Southeast Fairbanks Census Area. The agricultural lands affected by the Project primarily consist of land cultivated for oats, hay, and seed potatoes. Tables 8.2.2-1 and 8.2.2-2 summarize the agricultural land occupied by the Project (in acres) by borough and census area.

Agricultural land in the construction area will generally be taken out of production for one growing season. APP's Erosion Control, Revegetation, and Maintenance Plan (Plan) includes agricultural construction and reclamation procedures that will be implemented for the Project. APP's Plan addresses relevant aspects of pipeline construction and stabilization as they relate to cultivated lands (e.g., topsoil segregation, depth of cover, compaction limits, rock removal, irrigation/drain structures, weed and pest control, and easement restrictions). Impacts on this land use type will be short-term in nature, and agricultural productivity will be monitored for two to three years to verify reclamation.

Following construction, the majority of agricultural land uses will continue within the permanent, operational right-of-way. Some activities within the permanent right-of-way, such as planting of trees and shrubs near the pipeline will be prohibited.

### Federal Lands

On BLM-administered lands managed by the Utility Corridor RMP/EIS and Fortymile Framework Management Plan, development of agricultural lands is allowed for lands suitable for agricultural development. However, no known BLM-owned agricultural lands are traversed by the Project. Similarly, no known agricultural lands within DOD-managed lands will be crossed by the Project.

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## State and Private Lands

On state and private lands within the Tanana Basin Area, most potential agricultural lands lie in the Lower Tanana, Kantishna, Parks Highway/West Alaska Range, and Delta-Salcha sub-regions, two of which will be crossed by the Project (Lower Tanana and Delta-Salcha). The Tanana Basin Area Plan protects the option of using agricultural lands for future agricultural use through resource management designation. Additionally, grazing on improved (pasture) and unimproved (range) lands is generally allowed with exceptions of certain habitat categories, roadless areas, and in high value Dall sheep and grizzly bear habitats. Agricultural development may occur and be conveyed to private ownership where ADNR disposes of state lands that are designated for agricultural use (ADNR 1991).

Within the TVSF, improved pasture grazing is allowed on a case-by-case basis and grazing activities must meet several criteria such as consistency with an area's intent (U.S. Fish and Wildlife Service [FWS] 2001). Based on the TVSF's Management Plan, which is discussed further in Section 8.4.2, no grazing is currently occurring in the state forest.

## Other Agricultural Characteristics

### Prime Farmland

No known prime farmland is classified in the Project area.

### Specialty Crops

APP has identified one area where specialty crops are grown. Oats, hay, and seed potatoes are grown near approximate AMP 538.8, which may affect approximately 315.5 acres of agricultural land during construction (refer to Appendix 8A for land uses by MP). Mitigation will be based on agreements and/or easement conditions with the affected landowners or tenants.

### Conservation Reserve Program Land

APP has also reviewed available Conservation Reserve Program land data and no Conservation Reserve Program land will be affected by the Project.

## 8.2.2.4 Commercial/Industrial Land

Commercial/industrial land consists of power or utility stations, manufacturing or industrial plants, commercial or retail facilities, roads, military restricted areas, and oil and gas development areas. Tables 8.2.2-1 and 8.2.2-2 summarizes the commercial/industrial land occupied by the Pipeline Facilities (in acres) by borough and census area.

## Commercial Structures

Based on aerial photography and civil or field surveys, APP identified three locations where commercial or industrial structures or other non-residential buildings are within 50 feet of the construction work area, as listed in Table 8.2.2-3.


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TABLE 8.2.2-3				
Alaska Pipeline Project Buildings Within 50 Feet of the Construction Work Area <sup>a</sup>				
Segment/Borough or Census Area	Feature	Milepost <sup>b</sup>	Distance from Construction Work Area (feet)	Distance from Pipeline Centerline (feet)
POINT THOMSON GAS TRANSMISSION PIPELINE				
None				
ALASKA MAINLINE				
Fairbanks North Star Borough	Buildings/commercial	455.5	Within 50 feet of right-of-way (31.8 feet inside of the easterly portion of the construction area)	56
Southeast Fairbanks Census Area	Various structures (barns, shacks)	554.3	Within 50 feet of right-of-way (completely within southwesterly portion of the construction area)	41.9
	Various structures (sheds, barns)	571.8	Within 50 feet of right-of-way (completely within northeasterly portion of the construction area)	7
<sup>a</sup> No residences have been identified within 50 feet of the construction work area.				
<sup>b</sup> PT Pipeline milepost 0.0 starts at the PTU Alaska Mainline milepost 0.0 starts at the GTP.				

## Roads and Utilities


The APP will cross roads and utilities using standard construction techniques, as listed in Table 1.6.3-1 in Resource Report 1. Section 1.6.3.3 in Resource Report 1 describes typical road crossing procedures.

Roadways that typically have limited use could experience higher traffic volumes and heavy loads during the construction period, which could result in accelerating wear of the travel surface. Applicable permits will address any damage to roadways. Additionally, as noted in Section 1.6.1.14 of Resource Report 1, because the Dalton Highway is the only highway providing ground access to Prudhoe Bay, traffic control and scheduling on the Dalton Highway may be required during periods of high traffic volume. APP will coordinate with Alaska Department of Transportation and Public Facilities (ADOTPF) to address any traffic impacts on this highway. Additional discussions regarding potential impacts on other highways are underway with the ADOTPF.

### 8.2.2.5 Residential Land

The pipeline route has been aligned to avoid direct impacts on occupied residences and businesses. Based on aerial photography and civil or field surveys, APP identified no dwellings that are located within 50 feet of the construction work area. However, the construction and operation of Project will cross residential parcels on privately-owned lands, as listed in Tables 8.2.2-1 and 8.2.2-2. If any residences are affected as a result of route modifications, APP will develop construction mitigation plans for residences within 50 feet of the construction work area.

As discussed in Section 1.6.3.8 of Resource Report 1, construction activities in residential areas will be completed in a manner that will reduce disturbance to the residents. Construction and reclamation of residential land will be conducted in accordance with APP's Plan. APP will coordinate with residential landowners to address reasonable requests concerning construction, property access, cleanup, and reclamation.

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The winter season in Alaska typically consists of short daylight periods and extended dark hours and, therefore, will require artificial lighting. Some activities may occur near residential areas where illumination of the construction area may impact residences.

Potential air quality and noise impacts near residences and noise impacts associated with horizontal directional drilling activities near residences are discussed further in Sections 9.2 and 9.4 of Resource Report 9.

#### **8.2.2.6 Open Water**

Open water uses include waterbody crossings greater than 100 feet, flood control areas, and waterways (e.g., ponds). Tables 8.2.2-1 and 8.2.2-2 summarize where the Pipeline Facilities will occupy open water areas. For a more detailed description of the potential impacts to waterbody crossings within the Project area, refer to Resource Report 2.

### **8.2.3 ABOVEGROUND FACILITIES**

Tables 8.2.3-1 and 8.2.3-2 summarize the land requirements for the Aboveground Facilities<sup>8</sup> by land use type in facility dimensions and acreage, respectively.

[Note: APP is evaluating land needs for the Aboveground Facilities and will provide an update in the final report.]

#### **8.2.3.1 Gas Treatment Plant**

APP will construct a GTP located at the intersection of the Alaska Mainline at AMP 0.0 and the PT Pipeline at PMP 58.4. Facility construction and operation will occur within the area shown on Figure 1.1-1 in Resource Report 1. GTP site components are listed in Section 1.3.2 of Resource Report 1. The current location is on land designated commercial/industrial within the area leased by the Prudhoe Bay Unit and owned by the State of Alaska.

#### **8.2.3.2 Pipeline Aboveground Facilities**

In addition to the PT Pipeline and Alaska Mainline, APP will construct and operate compressor stations, meter stations, MLBVs, pig launchers, pig receivers, and provisions for intermediate sales gas delivery in Alaska as listed in Tables 8.2.3-1 and 8.2.3-2, which includes the locations and existing land uses at the Aboveground Facility locations associated with APP.

<sup>8</sup> Aboveground Facilities include the GTP, eight compressor stations, three custody meter stations, various MLBVs, pig launchers, pig receivers, provisions for intermediate gas delivery points, and cathodic protection facilities as discussed in Section 1.3.2 of Resource Report 1.



TABLE 8.2.3-1

**Alaska Pipeline Project  
Land Use and Ownership at Aboveground Facility Sites <sup>a</sup>**

Segment/Facility Type/Name	Milepost <sup>b</sup>	Borough or Census Area	Approximate Dimensions (feet)	Land Ownership	Existing Land Use <sup>c</sup>
<b>POINT THOMSON GAS TRANSMISSION PIPELINE</b>					
Point Thomson Unit (PTU) Meter Station	0.0	North Slope Borough	250 x 360	State of Alaska	Commercial/Industrial
<b>Mainline Block Valves (MLBVs)</b>					
MLBV-PT1 (at PTU Meter Station and Launcher)	0.0	North Slope Borough	70 x 85 <sup>e</sup>	State of Alaska	Commercial/Industrial
MLBV-PT2	18.9	North Slope Borough	70 x 85	State of Alaska	Commercial/Industrial
MLBV-PT3	38.8	North Slope Borough	70 x 85	State of Alaska	Commercial/Industrial
MLBV-PT4 (at Gas Treatment Plant [GTP] Receiver)	58.4	North Slope Borough	70 x 85 <sup>e</sup>	State of Alaska	Commercial/Industrial
<b>Launchers and Receivers</b>					
Launcher (at PTU Meter Station)	0.0	North Slope Borough	250 x 400 <sup>e</sup>	State of Alaska	Commercial/Industrial
Receiver (at GTP)	58.4	North Slope Borough	250 x 400 <sup>e</sup>	State of Alaska	Commercial/Industrial
<b>GAS TREATMENT PLANT</b>					
	PMP 58.4/0.0	North Slope Borough	Irregular <sup>d</sup>	State of Alaska	Commercial/Industrial <sup>f</sup>
Prudhoe Bay Meter Station (at the GTP)	0.0	North Slope Borough	250 x 360	State of Alaska	Commercial/Industrial
<b>ALASKA MAINLINE</b>					
<b>Compressor Stations</b>					
Happy Valley Compressor Station	79.6	North Slope Borough	1,025 x 1,050	State of Alaska T/A	Open Land
Galbraith Lake Compressor Station	149.9	North Slope Borough	1,025 x 1,050	BLM	Open Land
Chapman Creek Compressor Station	256.0	Yukon-Koyukuk Census Area	1,025 x 1,050	State of Alaska T/A	Open Land
Fort Hamlin Hills Compressor Station	338.0	Yukon-Koyukuk Census Area	1,025 x 1,050	BLM	Open Land
Tatalina River Compressor Station	419.1	Yukon-Koyukuk Census Area	1,025 x 1,050	State of Alaska	Open Land
Johnson Road Compressor Station	494.0	Fairbanks North Star Borough	1,025 x 1,050	State of Alaska	Open Land
George Lake Compressor Station	579.1	Southeast Fairbanks Census Area	1,025 x 1,050	State of Alaska	Open Land
Tetlin Junction Compressor Station	670.2	Southeast Fairbanks Census Area	1,025 x 1,050	Private	Open Land
<b>Meter Stations</b>					
Alaska Mainline Meter Station (at the GTP)	0.0	North Slope Borough	250 x 360	State of Alaska	Commercial/Industrial
<b>Mainline Block Valves</b>					
MLBV-AK1 (at Alaska Mainline Meter Station)	0.0	North Slope Borough	70 x 85 <sup>e</sup>	State of Alaska	Commercial/Industrial
MLBV-AK2	13.5	North Slope Borough	70 x 85	State of Alaska	Open Land
MLBV-AK3	29.0	North Slope Borough	70 x 85	State of Alaska	Open Land

TABLE 8.2.3-1

**Alaska Pipeline Project  
Land Use and Ownership at Aboveground Facility Sites <sup>a</sup>**

Segment/Facility Type/Name	Milepost <sup>b</sup>	Borough or Census Area	Approximate Dimensions (feet)	Land Ownership	Existing Land Use <sup>c</sup>
MLBV-AK4	40.4	North Slope Borough	70 x 85	ADOTPF	Commercial/ Industrial
MLBV-AK5	60.0	North Slope Borough	70 x 85	State of Alaska	Open Land
MLBV-AK6 (at Happy Valley Compressor Station)	79.6	North Slope Borough	70 x 85 <sup>a</sup>	State of Alaska T/A	Open Land
MLBV-AK7	97.4	North Slope Borough	70 x 85	State of Alaska T/A	Open Land
MLBV-AK8	116.0	North Slope Borough	70 x 85	State of Alaska T/A	Open Land
MLBV-AK9	131.5	North Slope Borough	70 x 85	BLM	Open Land
MLBV-AK10 (at Galbraith Lake Compressor Station)	149.9	North Slope Borough	70 x 85 <sup>a</sup>	BLM	Open Land
MLBV-AK11	169.6	North Slope Borough	70 x 85	BLM	Open Land
MLBV-AK12	189.3	Yukon-Koyukuk Census Area	70 x 85	BLM	Open Land
MLBV-AK13	208.0	Yukon-Koyukuk Census Area	70 x 85	BLM	Open Land
MLBV-AK14	225.1	Yukon-Koyukuk Census Area	70 x 85	BLM	Open Land
MLBV-AK15	242.7	Yukon-Koyukuk Census Area	70 x 85	State of Alaska T/A	Open Land
MLBV-AK16 (at Chapman Creek Compressor Station)	256.0	Yukon-Koyukuk Census Area	70 x 85 <sup>a</sup>	State of Alaska T/A	Open Land
MLBV-AK17	275.0	Yukon-Koyukuk Census Area	70 x 85	State of Alaska T/A	Open Land
MLBV-AK18	294.7	Yukon-Koyukuk Census Area	70 x 85	State of Alaska T/A	Open Land
MLBV-AK19	306.3	Yukon-Koyukuk Census Area	70 x 85	State of Alaska T/A	Open Land
MLBV-AK20	322.0	Yukon-Koyukuk Census Area	70 x 85	State of Alaska T/A	Open Land
MLBV-AK21 (at Fort Hamlin Hills Compressor Station)	338.0	Yukon-Koyukuk Census Area	70 x 85 <sup>a</sup>	BLM	Open Land
MLBV-AK22	356.9	Yukon-Koyukuk Census Area	70 x 85	State of Alaska T/A	Open Land
MLBV-AK23	366.3	Yukon-Koyukuk Census Area	70 x 85	State of Alaska	Open Land
MLBV-AK24	380.3	Yukon-Koyukuk Census Area	70 x 85	State of Alaska	Open Land
MLBV-AK25	400.0	Yukon-Koyukuk Census Area	70 x 85	State of Alaska	Open Land
MLBV-AK26 (at Tatalina River Compressor Station)	419.1	Yukon-Koyukuk Census Area	70 x 85 <sup>a</sup>	State of Alaska	Open Land
MLBV-AK27	433.6	Fairbanks North Star Borough	70 x 85	State of Alaska	Open Land
MLBV-AK28	452.1	Fairbanks North Star Borough	70 x 85	University of Alaska	Forest
MLBV-AK29	466.0	Fairbanks North Star Borough	70 x 85	State of Alaska	Open Land

TABLE 8.2.3-1

**Alaska Pipeline Project  
Land Use and Ownership at Aboveground Facility Sites <sup>a</sup>**

Segment/Facility Type/Name	Milepost <sup>b</sup>	Borough or Census Area	Approximate Dimensions (feet)	Land Ownership	Existing Land Use <sup>c</sup>
MLBV-AK30	481.2	Fairbanks North Star Borough	70 x 85	U.S. Army	Commercial/Industrial
MLBV-AK31 (at Johnson Road Compressor Station)	494.0	Fairbanks North Star Borough	70 x 85 <sup>e</sup>	State of Alaska	Open Land
MLBV-AK32	513.7	Fairbanks North Star Borough	70 x 85	State of Alaska	Open Land
MLBV-AK33	533.4	Southeast Fairbanks Census Area	70 x 85	State of Alaska	Open Land
MLBV-AK34	545.9	Southeast Fairbanks Census Area	70 x 85	University of Alaska	Forest
MLBV-AK35	565.2	Southeast Fairbanks Census Area	70 x 85	State of Alaska T/A	Open Land
MLBV-AK36 (at George Lake Compressor Station)	579.1	Southeast Fairbanks Census Area	70 x 85 <sup>e</sup>	State of Alaska	Open Land
MLBV-AK37	589.8	Southeast Fairbanks Census Area	70 x 85	State of Alaska	Open Land
MLBV-AK38	603.8	Southeast Fairbanks Census Area	70 x 85	State of Alaska T/A	Open Land
MLBV-AK39	623.1	Southeast Fairbanks Census Area	70 x 85	State of Alaska	Open Land
MLBV-AK40	632.4	Southeast Fairbanks Census Area	70 x 85	Private	Open Land
MLBV-AK41	651.6	Southeast Fairbanks Census Area	70 x 85	State of Alaska	Open Land
MLBV-AK42 (at Tetlin Junction Compressor Station)	670.2	Southeast Fairbanks Census Area	70 x 85 <sup>e</sup>	Private	Open Land
MLBV-AK43	688.8	Southeast Fairbanks Census Area	70 x 85	Private	Open Land
MLBV-AK44	705.1	Southeast Fairbanks Census Area	70 x 85	Private	Residential
MLBV-AK45	716.9	Southeast Fairbanks Census Area	70 x 85	State of Alaska T/A	Open Land
MLBV-AK46	735.6	Southeast Fairbanks Census Area	70 x 85	State of Alaska T/A	Open Land
<b>Launchers and Receivers</b>					
Launcher (at Alaska Mainline Meter Station)	0.0	North Slope Borough	250 x 400 <sup>e</sup>	State of Alaska	Commercial/Industrial
Launcher and Receiver (at Galbraith Compressor Station)	149.9	North Slope Borough	250 x 400 <sup>e</sup>	BLM	Open Land
Launcher and Receiver (at Fort Hamlin Hills Compressor Station)	338.0	Yukon-Koyukuk Census Area	250 x 400 <sup>e</sup>	BLM	Open Land
Launcher and Receiver (at Johnson Road Compressor Station)	494.0	Fairbanks North Star Borough	250 x 400 <sup>e</sup>	State of Alaska	Open Land
Launcher and Receiver (at Tetlin Junction Compressor Station)	670.2	Southeast Fairbanks Census Area	250 x 400 <sup>e</sup>	Private	Open Land


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TABLE 8.2.3-1					
Alaska Pipeline Project Land Use and Ownership at Aboveground Facility Sites <sup>a</sup>					
Segment/Facility Type/Name	Milepost <sup>b</sup>	Borough or Census Area	Approximate Dimensions (feet)	Land Ownership	Existing Land Use <sup>c</sup>
Intermediate Gas Delivery Points					
[Note: The following intermediate delivery points were identified by the In-State Gas Demand Study (prepared by Northern Economics, Inc. January 2010) and are currently considered the most likely off-take points based on expected demand. The final determination of the locations for intermediate gas delivery points will depend on input from potential shippers and the State of Alaska. APP will make provision for delivery along the pipeline at the points finally selected.]					
Livengood	404.4	Yukon-Koyukuk Census Area	50 x 60	State of Alaska T/A	Open Land
Fairbanks	468.6	Fairbanks North Star Borough	50 x 60	State of Alaska	Open Land
Delta Junction	549.0	Southeast Fairbanks Census Area	50 x 60	Alaska Mental Health Trust Authority	Forest
Tok	656.3	Southeast Fairbanks Census Area	50 x 60	Private	Open Land
<sup>a</sup> Cathodic protection facilities will be installed at the MLBV, compressor station, and meter station sites. Test lead posts will be located along the permanent right-of-way. <sup>b</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP. <sup>c</sup> Refer to Section 8.2 for a definition of land uses associated with the Project. <sup>d</sup> Refer to GTP facility location maps in Appendix 1B of Resource Report 1. <sup>e</sup> Facilities will be constructed and operated within the construction or operation area of another Project facility or within the temporary and permanent right-of-way, respectively, and, therefore, no additional land use impacts will occur beyond those already associated with these areas. The area will, however, be permanently converted to commercial/industrial land. <sup>f</sup> This land use type includes areas that, although not yet developed, are within the PBU and are slated for commercial/industrial development. T/A - tentatively assigned. Refer to Section 8.4.2 for a description of this classification.					

Typical Aboveground Facility plot plans are included in Appendix 1B of Resource Report 1.

TABLE 8.2.3-2

**Alaska Pipeline Project  
Land Uses Requirements for Construction and Operation of Aboveground Facilities (acres)**<sup>a, b</sup>

[Note: APP is developing land use classifications and, therefore, the land use types may change based on the unique characteristics of the State of Alaska. Final land use classifications will be provided with the final report. Further, the totals represented in the table may differ from Resource Report 1 due to available data sources used to classify land use types and will be provided with the final report.]

Segment/Aboveground Facility	Milepost <sup>c</sup>	Open		Forest		Agriculture		Commercial/ Industrial		Residential		Water		Total	
		Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.
POINT THOMSON GAS TRANSMISSION PIPELINE															
Point Thomson Unit (PTU) Meter Station <sup>d</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(MLBVs) <sup>d</sup>	Various; refer to Table 8.2.3-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Launchers and Receivers <sup>d</sup>	Various; refer to Table 8.2.3-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PT Pipeline Subtotal		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GAS TREATMENT PLANT <sup>e</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	235.0 <sup>f</sup>	235.0 <sup>f</sup>	0.0	0.0	0.0	0.0	235.0	235.0
ALASKA MAINLINE															
Compressor Stations															
Happy Valley Compressor Station	79.6	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0
Galbraith Lake Compressor Station	149.9	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0
Chapman Creek Compressor Station	256.0	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0
Fort Hamlin Hills Compressor Station	338.0	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0
Tatalina River Compressor Station	419.1	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0
Johnson Road Compressor Station	494.0	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0
George Lake Compressor Station	579.1	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0
Tetlin Junction Compressor Station	670.2	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0
Meter Stations															
Alaska Mainline Meter Station (at the GTP) <sup>d</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TABLE 8.2.3-2

**Alaska Pipeline Project**  
**Land Uses Requirements for Construction and Operation of Aboveground Facilities (acres)**<sup>a, b</sup>

[Note: APP is developing land use classifications and, therefore, the land use types may change based on the unique characteristics of the State of Alaska. Final land use classifications will be provided with the final report. Further, the totals represented in the table may differ from Resource Report 1 due to available data sources used to classify land use types and will be provided with the final report.]

Segment/Aboveground Facility	Milepost <sup>c</sup>	Open		Forest		Agriculture		Commercial/ Industrial		Residential		Water		Total	
		Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.
MLBVs <sup>d</sup>	Various; refer to Table 8.2.3-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Launchers and Receivers <sup>d</sup>	Various; refer to Table 8.2.3-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intermediate Gas Delivery Points <sup>d</sup>	Various; refer to Table 8.2.3-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska Mainline Subtotal		200.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	200.0	200.0
PROJECT TOTAL		200.0	200.0	0.0	0.0	0.0	0.0	235.0	235.0	0.0	0.0	0.0	0.0	435.0	435.0

[Note: The intermediate delivery points were identified by the In-State Gas Demand Study (prepared by Northern Economics, Inc. January 2010). The final determination of the locations for intermediate gas delivery points will depend on input from potential shippers and the State of Alaska. APP will make provision for delivery along the pipeline at the points finally selected.]

<sup>a</sup> Cathodic Protection Facilities will be installed at the MLBV, compressor station, and meter station sites, and cathodic protection test lead posts will be located along the permanent right-of-way. Therefore, no additional land impacts will occur beyond those already associated with these areas.


<sup>b</sup> Refer to Table 8.2.3-1 for dimensions used to calculate acreage impacts.

PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP.

<sup>d</sup> Facilities will be constructed and operated within the construction or operation footprint of another facility or within the temporary and permanent right-of-way, respectively, and, therefore, no additional land use impacts will occur beyond those already associated with these areas. The area will, however, be permanently converted to commercial/industrial land.

<sup>e</sup> Includes a 65-acre area for construction and operation of a GTP flare area.

This land use type includes areas that, although not yet developed, are within the PBU and are slated for commercial/industrial development.

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## 8.2.4 ASSOCIATED INFRASTRUCTURE

### 8.2.4.1 Gas Treatment Plant

Associated Infrastructure<sup>9</sup> for the GTP is discussed in Sections 1.3.3.1 and 1.4.3.1 of Resource Report 1. Infrastructure associated with the GTP will affect a total of approximately **732.0 acres** of commercial/industrial land and open water. This includes the module staging area, access roads, West Dock modifications, and water reservoir, pump pad, and transfer line, as discussed below. Following construction, approximately **208.0 acres** of commercial/industrial land and open water (freshwater reservoir) will be permanently required for operation. All of the Associated Infrastructure related to the GTP will be located on commercial/industrial land owned by the State of Alaska. More specific land use impacts by facility are discussed below.

- Construction and operation of a module staging area will affect 25.0 acres of commercial/industrial land.
- Construction of new ice roads and other new facility roads will affect 98.0 acres of commercial/industrial land. Ice roads will not be used during project operations; however, new facility roads affecting 39.0 acres of commercial/industrial land will be required for operation. Construction activities associated with modifying existing access roads and operational use of these roads will affect 17.0 acres of commercial/industrial land. As discussed in Table 1.4.3-1 of Resource Report 1, construction of the feed and transfer lines will occur within the area affected by ice roads.
- The construction camp and operation camp at the GTP will be within the area dedicated for the GTP site. Therefore, no additional land use impacts will occur beyond those already associated with this facility (i.e., commercial/industrial) (refer to Section 1.3.3 of Resource Report 1).
- A **(TBD)-acre** existing borrow site (Putuligayuk-23 [Put-23]) on commercial/industrial land will be temporarily used to access material, sand, and gravel required for the GTP.
- Construction land use impacts associated with the West Dock modifications will affect 480.0 acres, of which 15.0 acres is associated with the Dock Head 2 (DH-2) expansion (open water), 180.0 acres is associated with dock and channel dredging (open water), and 285.0 acres are associated with dredge disposal (open water). Approximately 15.0 acres of open water associated the DH-2 expansion will be required for operations; other West Dock modifications are anticipated to be temporary.
- Construction and operation land use impacts associated with the water reservoir and associated facilities will affect a total of 112.0 acres, of which 110.0 acres are associated with the future water reservoir (currently commercial/industrial land), 1.0 acre is associated with the reservoir pump pad (commercial/industrial land), and 1.0 acre is associated with the Putuligayuk River pump pad (commercial/industrial land). **[Note: Land use impacts associated with the water transfer line are to be determined and will be updated in the final report.]**

<sup>9</sup> Associated Infrastructure and land required to construct and operate APP include ATWS, access roads, helipads, airstrips, construction camps, pipe storage areas, contractor yards, borrow sites, and dock modifications, as discussed in Section 1.3.3 of Resource Report 1.

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#### 8.2.4.2 Pipeline Facilities

Associated Infrastructure for the Pipeline Facilities is summarized by land use type in Table 8.2.4-1. Appendix 8B lists by MP the locations and land uses of the additional temporary workspace (ATWS) associated with the APP.

[Note: Land use and land ownership associated with new and existing, Project-related access roads that require modifications will be updated with the final report.]

#### Pipeline Facilities/Helipads

Table 8.2.4-1 lists the locations, dimensions, land ownership, and existing land uses of the helipad locations associated with the APP. APP will install helipads at all compressor station sites, at construction camps, and at MLBV sites where existing roads do not provide adequate access and where a stable landing surface is not available along the permanent right-of-way. Table 1.3.3-3 in Resource Report 1 lists the temporary and permanent helipads that will be required for the Project. Of the helipads installed during construction, those located at permanent facilities will be maintained for Project operation. The remaining helipads will be decommissioned in accordance with landowner or land management agency requirements.

TABLE 8.2.4-1				
Alaska Pipeline Project Land Use and Ownership at Helipads				
Segment/Borough or Census Area/Helipad	Milepost <sup>a</sup>	Approximate Dimensions (feet) <sup>f</sup>	Land Ownership	Existing Land Use <sup>b, c</sup>
<b>POINT THOMSON GAS TRANSMISSION PIPELINE</b>				
North Slope Borough				
PTU Meter Station	0.0	100 x 100 <sup>d</sup>	State of Alaska	Commercial/Industrial
MLBV-PT1 (at PTU Meter Station and Launcher)	0.0	100 x 100 <sup>e</sup>	State of Alaska	Commercial/Industrial
Point Thomson East Storage Yard	1.3	100 x 100 <sup>d</sup>	State of Alaska	Commercial/Industrial
MLBV-PT2	18.9	100 x 100 <sup>d</sup>	State of Alaska	Commercial/Industrial
MLBV-PT3	38.8	100 x 100 <sup>d</sup>	State of Alaska	Commercial/Industrial
Point Thomson Central 1 Storage Yard	45.0	100 x 100 <sup>d</sup>	State of Alaska	Commercial/Industrial
Point Thomson Central 2 Storage Yard	45.5	100 x 100 <sup>d</sup>	State of Alaska	Commercial/Industrial
Point Thomson West Storage Yard	50.4	100 x 100 <sup>d</sup>	State of Alaska	Commercial/Industrial
MLBV-PT4 (at GTP Receiver)	58.4	100 x 100 <sup>d</sup>	State of Alaska	Commercial/Industrial
<b>ALASKA MAINLINE</b>				
North Slope Borough				
Alaska Mainline Meter Station	0.0	100 x 100 <sup>d</sup>	State of Alaska	Commercial/Industrial
MLBV-AK1	0.0	100 x 100 <sup>e</sup>	State of Alaska	Commercial/Industrial
Prudhoe Bay Storage Yard	3.1	100 x 100 <sup>d</sup>	State of Alaska	Commercial/Industrial
Deadhorse Camp (1)	12.8	100 x 100 <sup>d</sup>	State of Alaska	Open Land
MLBV-AK2	13.5	100 x 100	State of Alaska	Open Land
MLBV-AK3	29.0	100 x 100	State of Alaska	Open Land
MLBV-AK4	40.4	100 x 100	ADOTPF	Open Land
Franklin Bluff Camp (2)	44.3	100 x 100 <sup>d</sup>	State of Alaska	Open Land
MLBV-AK5	60.0	100 x 100	State of Alaska	Open Land
MLBV-AK6	79.6	100 x 100 <sup>e</sup>	State of Alaska T/A	Open Land
Happy Valley Compressor Station	79.6	100 x 100 <sup>d</sup>	State of Alaska T/A	Open Land
Happy Valley Camp (3)	87.0	100 x 100 <sup>d</sup>	State of Alaska T/A	Open Land
Happy Valley Storage Yard	88.1	100 x 100 <sup>d</sup>	State of Alaska T/A	Open Land

TABLE 8.2.4-1

**Alaska Pipeline Project  
Land Use and Ownership at Helipads**

Segment/Borough or Census Area/Helipad	Milepost <sup>a</sup>	Approximate Dimensions (feet) <sup>f</sup>	Land Ownership	Existing Land Use <sup>b, c</sup>
MLBV-AK7	97.4	100 x 100	State of Alaska T/A	Open Land
MLBV-AK8	116.0	100 x 100	State of Alaska T/A	Open Land
MLBV-AK9	131.5	100 x 100	BLM	Open Land
Galbraith Lake Storage Yard	144.3	100 x 100 <sup>d</sup>	BLM	Open Land
Galbraith Camp (4)	145.7	100 x 100 <sup>d</sup>	BLM	Open Land
MLBV-AK10	149.9	100 x 100 <sup>e</sup>	BLM	Open Land
Galbraith Compressor Station	149.9	100 x 100 <sup>d</sup>	BLM	Open Land
Atigun River Camp (5)	168.7	100 x 100 <sup>d</sup>	BLM	Open Land
Atigun River Storage Yard	169.0	100 x 100 <sup>d</sup>	BLM	Open Land
MLBV-AK11	169.6	100 x 100	BLM	Open Land
Chandalar Camp (6)	177.8	100 x 100 <sup>d</sup>	BLM	Open Land
Chandalar Shelf Storage Yard	179.9	100 x 100 <sup>d</sup>	BLM	Open Land
Yukon-Koyukuk census area				
MLBV-AK12	189.3	100 x 100	BLM	Open Land
MLBV-AK13	208.0	100 x 100	BLM	Open Land
Dietrich Camp (7)	210.1	100 x 100 <sup>e</sup>	BLM	Open Land
Dietrich Storage Yard	210.2	100 x 100 <sup>d</sup>	BLM	Open Land
MLBV-AK14	225.1	100 x 100	BLM	Open Land
MLBV-AK15	242.7	100 x 100	State of Alaska T/A	Open Land
Coldfoot Camp (8)	244.3	100 x 100 <sup>d</sup>	State of Alaska	Open Land
MLBV-AK16	256.0	100 x 100 <sup>e</sup>	State of Alaska T/A	Open Land
Chapman Creek Compressor Station	256.0	100 x 100 <sup>d</sup>	BLM	Open Land
MLBV-AK17	275.0	100 x 100	State of Alaska T/A	Open Land
Prospect Creek Storage Yard	281.7	100 x 100 <sup>d</sup>	BLM	Open Land
MLBV-AK18	294.7	100 x 100	State of Alaska T/A	Open Land
MLBV-AK19	306.3	100 x 100	State of Alaska T/A	Open Land
Kanuti River (Old Man) Camp (9)	308.7	100 x 100 <sup>d</sup>	BLM	Open Land
MLBV-AK20	322.0	100 x 100	State of Alaska T/A	Open Land
Dall River Storage Yard	329.8	100 x 100 <sup>d</sup>	BLM	Open Land
MLBV-AK21	338.0	100 x 100 <sup>e</sup>	BLM	Open Land
Fort Hamlin Hills Compressor Station	338.0	100 x 100 <sup>d</sup>	BLM	Open Land
Five Mile Camp (10)	355.6	100 x 100 <sup>d</sup>	BLM	Open Land
Five Mile Storage Yard	356.4	100 x 100 <sup>d</sup>	BLM	Open Land
MLBV-AK22	356.9	100 x 100	State of Alaska T/A	Open Land
MLBV-AK23	366.3	100 x 100	State of Alaska	Open Land
MLBV-AK24	380.3	100 x 100	State of Alaska	Open Land
Hess Creek Storage Yard	387.5	100 x 100 <sup>d</sup>	State of Alaska T/A	Open Land
MLBV-AK25	400.0	100 x 100	State of Alaska	Open Land
Livengood Camp (11)	404.4	100 x 100 <sup>d</sup>	Private	Commercial/Industrial /Residential
			State of Alaska T/A	Open Land
			State of Alaska T/A	Open Land
MLBV-AK26	419.1	100 x 100 <sup>e</sup>	State of Alaska	Open Land
Tatalina River Compressor Station	419.1	100 x 100 <sup>d</sup>	State of Alaska T/A	Open Land
			Private	Open Land

TABLE 8.2.4-1

**Alaska Pipeline Project  
Land Use and Ownership at Helipads**

Segment/Borough or Census Area/Helipad	Milepost <sup>a</sup>	Approximate Dimensions (feet) <sup>f</sup>	Land Ownership	Existing Land Use <sup>b, c</sup>
			Private	Open Land
			Private	Open Land
			Private	Open Land
			BLM subject to Native Allotment Application	Open Land
Tatalina River Storage Yard	419.4	100 x 100 <sup>d</sup>	State of Alaska	Open Land
MLBV-AK27	433.6	100 x 100	State of Alaska	Open Land
Fairbanks North Star Borough				
Treasure Creek Storage Yard	448.7	100 x 100 <sup>d</sup>	State of Alaska	Open Land
MLBV-AK28	452.1	100 x 100	Board of Regents of the University of Alaska	Forested
MLBV-AK29	466.0	100 x 100	State of Alaska	Open Land
Little Chena Camp (12)	469.0	100 x 100 <sup>d</sup>	State of Alaska	Open Land
			Private	Open Land
			Private	Open Land
Fort Wainwright Storage Yard	470.4	100 x 100 <sup>d</sup>	Private	Open Land
			Private	Open Land
			Private	Open Land
MLBV-AK30	481.2	100 x 100	U.S. Army	Commercial/Industrial
MLBV-AK31	494.0	100 x 100 <sup>e</sup>	State of Alaska	Open Land
Johnson Road Compressor Station	494.0	100 x 100 <sup>d</sup>	Fairbanks North Star Borough	Open Land
			Private	Commercial/Industrial
			Private	Open Land
			State of Alaska	Open Land
			Private	Open Land
			Private	Commercial/Industrial
Johnson Road Camp (13)	495.3	100 x 100 <sup>d</sup>	Private	Commercial/Industrial
			Private	Commercial/Industrial
			Private	Commercial/Industrial
Salcha River Storage Yard	503.7	100 x 100 <sup>d</sup>	State of Alaska	Open Land
MLBV-AK32	513.7	100 x 100	State of Alaska	Open Land
Southeast Fairbanks Census Area				
Rosa Creek Camp (14)	521.5	100 x 100 <sup>d</sup>	State of Alaska	Open Land
Quartz Lake Storage Yard	532.8	100 x 100 <sup>d</sup>	State of Alaska	Open Land
MLBV-AK33	533.4	100 x 100	State of Alaska	Open Land
MLBV-AK34	545.9	100 x 100	Board of Regents of the University of Alaska	Forested
Delta Junction Camp (15)	549.1	100 x 100 <sup>d</sup>	State of Alaska T/A Military	Open Land Commercial/Industrial
Arrow Creek Storage Yard	563.8	100 x 100 <sup>d</sup>	State of Alaska T/A	Open Land
MLBV-AK35	565.2	100 x 100	State of Alaska T/A	Open Land
MLBV-AK36	579.1	100 x 100 <sup>e</sup>	State of Alaska	Open Land
George Lake Compressor Station	579.1	100 x 100 <sup>d</sup>	State of Alaska	Open Land
			Private	Agricultural




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TABLE 8.2.4-1				
Alaska Pipeline Project Land Use and Ownership at Helipads				
Segment/Borough or Census Area/Helipad	Milepost <sup>a</sup>	Approximate Dimensions (feet) <sup>f</sup>	Land Ownership	Existing Land Use <sup>b, c</sup>
George Lake Camp (16)	582.0	100 x 100 <sup>d</sup>	State of Alaska	Open Land
MLBV-AK37	589.8	100 x 100	State of Alaska	Open Land
Sears Creek Storage Yard	593.3	100 x 100 <sup>d</sup>	State of Alaska	Open Land
MLBV-AK38	603.8	100 x 100	State of Alaska T/A	Open Land
MLBV-AK39	623.1	100 x 100	State of Alaska	Open Land
Cathedral Bluffs Alternate Storage Yard	625.7	100 x 100 <sup>d</sup>	Private	Open Land
			State of Alaska	Open Land
MLBV-AK40	632.4	100 x 100	Private	Open Land
Cathedral Bluffs Storage Yard	632.0	100 x 100 <sup>d</sup>	State of Alaska	Open Land
Tok River Alternate Storage Yard	646.3	100 x 100 <sup>d</sup>	State of Alaska	Open Land
Tok Alternate Camp	647.1	100 x 100 <sup>d</sup>	State of Alaska	Open Land
MLBV-AK41	651.6	100 x 100	State of Alaska	Open Land
Tok Camp (17)	659.3	100 x 100 <sup>d</sup>	Private	Open Land
Tok River Storage Yard	662.2	100 x 100 <sup>d</sup>	State of Alaska leased to U.S. DHS	Open Land
MLBV-AK42	670.2	100 x 100 <sup>e</sup>	Private	Open Land
Tetlin Junction Compressor Station	670.2	100 x 100 <sup>d</sup>	Private	Open Land
MLBV-AK43	688.8	100 x 100	Private	Open Land
Beaver Creek Camp (18)	700.3	100 x 100 <sup>d</sup>	BLM	Open Land
			Private	Open Land
Beaver Creek Storage Alternate	701.5	100 x 100 <sup>d</sup>	BLM	Open Land
Beaver Creek Alternate Camp (18)	701.5	100 x 100 <sup>d</sup>	BLM	Open Land
Northway Junction Storage Yard	702.8	100 x 100 <sup>d</sup>	Private	Open Land
MLBV-AK44	705.1	100 x 100	Private	Residential
MLBV-AK45	716.9	100 x 100	State of Alaska T/A	Open Land
Seaton Storage Yard	731.9	100 x 100 <sup>d</sup>	State of Alaska T/A	Open Land
MLBV-AK46	735.6	100 x 100	State of Alaska T/A	Open Land
<sup>a</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP. <sup>b</sup> Refer to Section 8.2 for a definition of land uses associated with the Project. <sup>c</sup> Table 1.3.3-3 in Resource Report 1 lists the temporary and permanent helipads that will be required for the Project. <sup>d</sup> Helipads at storage yards, construction camps, and compressor stations will fall within the footprint of that site. Additionally, helipads at MLBVs associated with compressor station sites will fall within the footprint of the compressor station site. <sup>e</sup> Only one helipad will occur at compressor station sites; does not reflect more than one helipad at same milepost location. <sup>f</sup> Reflects "toe of pad" dimensions. T/A - Tentatively assigned.				

## Pipeline Facilities/Airstrips

Table 8.2.4-2 lists the locations, dimensions, ownership, and existing land uses of the airstrip locations associated with the APP, which will be used to transport personnel and freight to and from the Project area. All of these airstrips are currently in existence. APP does not anticipate the need to upgrade any existing commercial airports for the Project, but may need to make minor upgrades to some existing non-commercial airstrips. [Note: APP is evaluating airstrip requirements and will update this information in the final report.]

TABLE 8.2.4-2

**Alaska Pipeline Project  
Land Use and Ownership at Airstrips**

Segment/Borough or Census Area/Airstrip Name	Approx. Corresponding Milepost <sup>a</sup>	Distance (miles) and Direction from Pipeline	Dimensions of Upgrades (feet)	Land Ownership	Existing Land Use <sup>b</sup>
<b>POINT THOMSON PIPELINE</b>					
North Slope Borough					
Badami Airstrip	22.5	0.3 S	NA	Private	Commercial/Industrial
Deadhorse Airstrip	53.5	5.6 SW	NA	State of Alaska, ADOTPF	Commercial/Industrial
<b>ALASKA MAINLINE</b>					
North Slope Borough					
Deadhorse Airstrip	10.1	4.6 E	NA	State of Alaska, ADOTPF	Commercial/Industrial
Franklin Bluffs Airstrip	43.7	0.4 SE	TBD	State of Alaska	Commercial/Industrial
Happy Valley Airstrip	86.8	0.4 E	TBD	State of Alaska T/A	Commercial/Industrial
Galbraith Lake Airport	144.4	1.1 SW	TBD	State of Alaska, ADOTPF	Commercial/Industrial
Yukon-Koyukuk Census Area					
Chandalar Airstrip	177.9	34.1 SE	TBD	State of Alaska, ADOTPF	Commercial/Industrial
Dietrich Airport	208.5	0.2 W	TBD	BLM	Commercial/Industrial
Coldfoot Airstrip	245.5	1.1 NW	NA	State of Alaska, ADOTPF	Commercial/Industrial
Old Man Camp Airstrip	310.0	1.3 NE	TBD	BLM	Commercial/Industrial
Five Mile Airport	355.1	0.2 NE	TBD	BLM	Commercial/Industrial
Livengood Airstrip	404.9	0.3 SW	TBD	State of Alaska, ADOTPF	Commercial/Industrial
Fairbanks North Star Borough					
Fairbanks International Airport	452.2	13.3 SW	NA	State of Alaska, ADOTPF	Commercial/Industrial
Southeast Fairbanks Census Area					
Delta Junction Airstrip	546.7	0.7 SW	TBD	City of Delta Junction	Commercial/Industrial
Tanacross Airstrip	643.9	0.2 NE	NA	BLM	Commercial/Industrial
Tok Airport	656.7	1.3 SW	NA	State of Alaska, ADOTPF	Commercial/Industrial
Tetlin Airstrip	675.3	8.5 SW	NA	State of Alaska, ADOTPF	Commercial/Industrial
Northway Airport	702.8	6.3 SW	NA	State of Alaska, ADOTPF	Commercial/Industrial
Anchorage Municipality					
Ted Stevens Anchorage International Airport	550.1	241.1 SW	NA	State of Alaska, ADOTPF	Commercial/Industrial
Merrill Field	550.1	239.0 SW	NA	State of Alaska, ADOTPF	Commercial/Industrial
Valdez-Cordova Census Area					
Whittier Airport	588.7	241.2 SW	NA	State of Alaska, ADOTPF	Commercial/Industrial
Valdez Airport	629.8	174.6 SW	NA	State of Alaska, ADOTPF	Commercial/Industrial


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TABLE 8.2.4-2 Alaska Pipeline Project Land Use and Ownership at Airstrips					
Segment/Borough or Census Area/Airstrip Name	Approx. Corresponding Milepost <sup>a</sup>	Distance (miles) and Direction from Pipeline	Dimensions of Upgrades (feet)	Land Ownership	Existing Land Use <sup>b</sup>
Kenai Peninsula Borough Seward Airport	628.8	291.3 SW	NA	State of Alaska, ADOTPF	Commercial/Industrial
Skagway-Hoonah-Angoon Census Area Skagway Airport	745.1	287.4 SE	NA	State of Alaska, ADOTPF	Commercial/Industrial
Municipality of Haines Borough Haines Airport	745.1	295.9 SE	NA	State of Alaska, ADOTPF	Commercial/Industrial
Juneau City and Borough Juneau International Airport	745.1	366.0 SE	NA	City of Juneau	Commercial/Industrial
<sup>a</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP. <sup>b</sup> Refer to Section 8.2 for a definition of land uses associated with the Project. T/A - tentatively assigned. Refer to Section 8.4 of a description of this classification.					

### Pipeline Facilities/Construction Camps, Pipe Storage Areas, and Contractor Yards

Tables 8.2.4-3 and 8.2.4-4 lists the locations, land ownership, and existing land uses at the construction camps, pipe storage areas, and contractor yards with dimensions and acreages, respectively. Due to the Project's location in an area with limited existing infrastructure, APP will require the use of these various sites during construction to accommodate Project personnel, including work crews, supervisors, inspectors, field management, and support staff; temporary pipe storage; and construction staging, storing materials, equipment rig-up, setting up temporary construction trailers, fabrication work, safety and environmental training, equipment repair, and contract administration. APP has maximized the use of previously existing sites to locate camps and yards. Table 1.3.3-5 in Resource Report 1 lists whether each site has been previously used.

TABLE 8.2.4-3

**Alaska Pipeline Project  
Land Use and Ownership at Construction Camps, Pipe Storage Areas, and Contractor Yards**

Segment/Facility/Borough or Census Area/ Name	Milepost <sup>a</sup>	Distance (miles) and Direction from Pipeline	Land Ownership	Existing Land Use <sup>c</sup>
<b>POINT THOMSON GAS TRANSMISSION PIPELINE</b>				
<b>Storage Yard</b>				
North Slope Borough				
Point Thomson East	1.3	0.1 mile SE	BLM	Commercial/Industrial
Point Thomson Central 1	45.0	0.1 mile SW	State of Alaska	Commercial/Industrial
Point Thomson Central 2	45.5	0.1 mile SW	State of Alaska	Commercial/Industrial
Point Thomson West	50.4	2.5 miles SW	State of Alaska	Commercial/Industrial
<b>Meter Station</b>				
North Slope Borough				
PTU Meter Station	0.0	0.0	State of Alaska	Commercial/Industrial
<b>ALASKA MAINLINE</b>				
<b>Storage Yard</b>				
North Slope Borough				
Prudhoe Bay	3.1	6.4 miles SE	State of Alaska	Commercial/Industrial
Happy Valley	88.1	0.1 mile E	State of Alaska T/A	Open Land
Galbraith Lake	144.3	1.4 miles SW	BLM	Open Land
Atigun River <sup>d</sup>	169.0	0.1 mile W	BLM	Open Land
Chandalar Shelf <sup>d</sup>	179.9	0.2 mile SE	BLM	Open Land
<b>Yukon-Koyukuk Census Area</b>				
Dietrich	210.2	0.2 mile E	BLM	Open Land
Prospect Creek <sup>d</sup>	281.7	1.2 miles W	BLM	Open Land
Dall River	329.8	0.7 mile SW	BLM	Open Land
Five Mile	356.4	0.2 mile NE	BLM	Open Land
Hess Creek <sup>d</sup>	387.5	0.1 mile W	State of Alaska T/A	Open Land
Tatalina River <sup>d</sup>	419.4	1.2 miles NE	State of Alaska	Open Land
<b>Fairbanks North Star Borough</b>				
Treasure Creek	448.7	0.7 mile NE	State of Alaska	Open Land
Fort Wainwright	470.4	9.9 miles SW	Private	Open Land
Salcha River	503.7	0.1 mile S	State of Alaska	Open Land
<b>Southeast Fairbanks Census Area</b>				
Quartz Lake	532.8	0.1 mile SW	State of Alaska	Open Land
Arrow Creek <sup>d</sup>	563.8	0.4 mile SW	State of Alaska T/A	Open Land
Sears Creek <sup>d</sup>	593.3	0.1 mile N	State of Alaska	Open Land
Cathedral Bluffs Alternate <sup>c</sup>	625.7	0.1 mile SW	State of Alaska, Private	Open Land
Cathedral Bluffs <sup>d</sup>	632.0	0.4 mile N	State of Alaska	Open Land
Tok River Alternate <sup>d</sup>	646.3	0.1 mile SE	State of Alaska	Open Land
Tok River <sup>d</sup>	662.2	0.1 mile N	Private, State of Alaska leased to U.S. DHS	Open Land
Beaver Creek Camp & Storage Alternate	701.5	0.1 mile SW	BLM	Open Land

TABLE 8.2.4-3

**Alaska Pipeline Project  
Land Use and Ownership at Construction Camps, Pipe Storage Areas, and Contractor Yards**

Segment/Facility/Borough or Census Area/ Name	Milepost <sup>a</sup>	Distance (miles) and Direction from Pipeline	Land Ownership	Existing Land Use <sup>c</sup>
Northway Junction <sup>d</sup>	702.8	0.6 mile W	Private	Open Land
Seaton <sup>d</sup>	731.9	0.3 mile W	State of Alaska T/A, Tetlin National Wildlife Refuge	Open Land
<b>Compressor Station</b>				
<b>North Slope Borough</b>				
Alaska Mainline Meter Station (MLBV-AK1)	0.0	0.0	State of Alaska	Commercial/Industrial
Happy Valley Compressor Station (MLBV-AK6)	79.6	0.0	State of Alaska T/A	Open Land
Galbraith Lake Compressor Station (MLBV-AK10)	149.9	0.0	BLM	Open Land
<b>Yukon-Koyukuk Census Area</b>				
Chapman Creek Compressor Station (MLBV-AK16)	256.0	0.0	BLM	Open Land
Fort Hamlin Hills Compressor Station (MLBV-AK21)	338.0	0.0	BLM	Open Land
Tatalina River Compressor Station (MLBV-AK26)	419.1	0.0	State of Alaska T/A, Private	Open Land
<b>Fairbanks North Star Borough</b>				
Johnson Road Compressor Station (MLBV-AK31)	494.0	0.0	Fairbanks North Star Borough, Private, State of Alaska	Open Land, Commercial/Industrial
<b>Southeast Fairbanks Census Area</b>				
George Lake Compressor Station (MLBV-AK36)	579.1	0.0	State of Alaska, Private	Open Land, Agricultural
Tetlin Junction Compressor Station (MLBV-AK42)	670.2	0.0	Private	Open Land
<b>Construction Camps</b>				
<b>North Slope Borough</b>				
Camp 1 – Deadhorse	12.8	4.0 mile NE	State of Alaska	Open Land
Camp 2 – Franklin Bluff <sup>d</sup>	44.3	0.2 mile E	State of Alaska	Open Land
Camp 3 – Happy Valley	87.0	0.1 mile W	State of Alaska T/A	Open Land
Camp 4 – Galbraith Lake <sup>d</sup>	145.7	2.1 mile SW	BLM	Open Land
Camp 5 – Atigun River <sup>d</sup>	168.7	0.1 mile E	BLM	Open Land
Camp 6 – Chandalar <sup>d</sup>	177.8	0.3 mile NW	BLM	Open Land
<b>Yukon-Koyukuk Census Area</b>				
Camp 7 – Dietrich	210.1	0.5 mile E	BLM	Open Land
Camp 8 – Coldfoot <sup>d</sup>	244.3	0.2 mile W	State of Alaska T/A	Open Land
Camp 9 – Kanuti River (Old Man) <sup>d</sup>	308.7	0.2 mile E	BLM	Open Land
Camp 10 – Five Mile <sup>d</sup>	355.6	0.2 mile NE	BLM	Open Land
Camp 11 – Livengood <sup>d</sup>	404.4	0.4 mile SW	Private, State of Alaska T/A	Commercial/Industrial, Open Land
<b>Fairbanks North Star Borough</b>				
Camp 12 – Little Chena	469.0	0.2 mile W	State of Alaska, Private	Open Land
Camp 13 – Johnson Road	495.3	0.4 mile SW	Private	Commercial/Industrial
<b>Southeast Fairbanks Census Area</b>				


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TABLE 8.2.4-3				
Alaska Pipeline Project				
Land Use and Ownership at Construction Camps, Pipe Storage Areas, and Contractor Yards				
Segment/Facility/Borough or Census Area/ Name	Milepost <sup>a</sup>	Distance (miles) and Direction from Pipeline	Land Ownership	Existing Land Use <sup>c</sup>
Camp 14 – Rosa Creek	521.5	0.2 mile SW	State of Alaska	Open Land
Camp 15 – Delta Junction	549.1	0.3 mile SW	State of Alaska T/A, Military	Open Land, Commercial/Industrial
Camp 16 – George Lake <sup>d</sup>	582.0	0.1 mile SW	State of Alaska	Open Land
Camp 17 – Tok Alternate	647.1	0.2 mile SE	State of Alaska	Open Land
Camp 17 – Tok	659.3	0.2 mile SW	Private	Open Land
Camp 18 – Beaver Creek	700.3	0.1 mile NE	BLM, Private	Open Land
Camp 18 – Beaver Creek Alternate	701.5	0.1 mile SW	BLM	Open Land

Dimensions for construction camps, pipe storage areas, and contractor yards are depicted on the maps provided in Appendix 1A of Resource Report 1.

<sup>a</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP.

<sup>b</sup> All other categories which include construction camps, pipe storage areas, and contractor yards have irregular shapes and have unique dimensions.

<sup>c</sup> Refer to Section 8.2 for a definition of land uses associated with the Project.

<sup>d</sup> Area has been used previously; however, may require area larger than existing footprint.

T/A - Tentatively assigned. Refer to Section 8.4 for a description of this classification.

Following construction, APP intends to remove and disassemble surface facilities for temporary camps, pipe storage areas, and contractor yards. Some facilities and gravel pads installed to provide building support may be left in place in accordance with landowner or land management agency agreements.

### Pipeline Facilities/Borrow Sites

Appendix 8C lists the locations and existing land uses of the potential borrow sites that could be used during the APP construction. APP will require the use of borrow material (sand and gravel) for compressor station, camp, pipe storage area, contractor yard, access road, refurbishment of airstrips, ditch import fill at select locations, right-of-way preparation, MLBVs, and helicopter pad activities.



TABLE 8.2.4-4

**Alaska Pipeline Project  
Land Uses Affected by Construction and Operation of Construction Camps, Pipe Storage Areas, and Contractor Yards (acres) <sup>a</sup>**

[Note: APP is developing land use classifications and, therefore, the land use types may change based on the unique characteristics of the State of Alaska. Land use classifications will be updated in the final report. Further, the totals represented in the table may differ from Resource Report 1 due to available data sources used to classify land use types and will be updated in the final report.]

Segment/Borough/ Camp or Yard Name	Milepost <sup>b</sup>	Open		Forest		Agriculture		Commercial/ Industrial		Residential		Water		Total	
		Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.
POINT THOMSON GAS TRANSMISSION PIPELINE															
Storage Yard															
Point Thomson East	1.3	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.0	0.0
Point Thomson Central 1	45.0	51.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51.8	0.0
Point Thomson Central 2	45.5	71.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.5	0.0
Point Thomson West	50.4	130.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	130.7	0.0
Compressor Station															
PTU Meter Station	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
PT Pipeline Subtotal		324.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	324.0	2.1
ALASKA MAINLINE															
Storage Yard															
Prudhoe Bay	3.1	131.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	131.0	0.0
Happy Valley	88.1	29.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0	0.0
Galbraith Lake	144.3	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Atigun River	169.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.0
Chandalar Shelf	179.9	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Dietrich	210.2	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Prospect Creek	281.7	36.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.0	0.0
Dall River	329.8	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Five Mile	356.4	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Hess Creek	387.5	38.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.0	0.0
Tatalina River	419.4	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Treasure Creek	448.7	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Fort Wainwright	470.4	89.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.0	0.0
Salcha River	503.7	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Quartz Lake	532.8	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Arrow Creek	563.8	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0

TABLE 8.2.4-4

**Alaska Pipeline Project**  
**Land Uses Affected by Construction and Operation of Construction Camps, Pipe Storage Areas, and Contractor Yards (acres) <sup>a</sup>**

[Note: APP is developing land use classifications and, therefore, the land use types may change based on the unique characteristics of the State of Alaska. Land use classifications will be updated in the final report. Further, the totals represented in the table may differ from Resource Report 1 due to available data sources used to classify land use types and will be updated in the final report.]

Segment/Borough/ Camp or Yard Name	Milepost <sup>b</sup>	Open		Forest		Agriculture		Commercial/ Industrial		Residential		Water		Total	
		Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.
Sears Creek	593.3	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0
Cathedral Bluffs Alternate	625.7	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0
Cathedral Bluffs	632.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0
Tok River Alternate	646.3	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0
Tok River	662.2	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0
Beaver Creek Camp & Storage Alternate	701.5	37.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0
Northway Junction	702.8	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Seaton	731.9	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Compressor Station															
Alaska Mainline Meter Station (MLBV-AK1)	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
Happy Valley Compressor Station (MLBV-AK6)	79.6	0.0	22.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.9
Galbraith Lake Compressor Station (MLBV-AK10)	149.9	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.2
Chapman Creek Compressor Station (MLBV-AK16)	256.0	0.0	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.7
Fort Hamlin Hills Compressor Station (MLBV-AK21)	338.0	0.0	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.7
Tatalina River Compressor Station (MLBV-AK26)	419.1	0.0	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.7
Johnson Road Compressor Station (MLBV-AK31)	494.0	0.0	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.7
George Lake Compressor Station (MLBV-AK36)	579.1	0.0	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.7
Tetlin Junction Compressor Station (MLBV-AK42)	670.2	0.0	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.7

TABLE 8.2.4-4

**Alaska Pipeline Project**

**Land Uses Affected by Construction and Operation of Construction Camps, Pipe Storage Areas, and Contractor Yards (acres) <sup>a</sup>**

[Note: APP is developing land use classifications and, therefore, the land use types may change based on the unique characteristics of the State of Alaska. Land use classifications will be updated in the final report. Further, the totals represented in the table may differ from Resource Report 1 due to available data sources used to classify land use types and will be updated in the final report.]

Segment/Borough/ Camp or Yard Name	Milepost <sup>b</sup>	Open		Forest		Agriculture		Commercial/ Industrial		Residential		Water		Total	
		Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.
Construction Camp															
Camp 1 – Deadhorse	12.8	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 2 – Franklin Bluff	44.3	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 3 – Happy Valley	87.0	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 4 – Galbraith Lake	145.7	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 5 – Atigun River	168.7	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.0	0.0
Camp 6 – Chandalar	177.8	35.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.0	0.0
Camp 7 – Dietrich	210.1	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 8 – Coldfoot	244.3	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 9 – Kanuti River (Old Man)	308.7	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 10 - Five Mile	355.6	39.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.0	0.0
Camp 11 – Livengood	404.4	18.1	0.0	0.0	0.0	0.0	0.0	30.9	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 12 – Little Chena	469.0	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 13 – Johnson Road	495.3	2.9	0.0	0.0	0.0	0.0	0.0	46.1	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 14 – Rosa Creek	521.5	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 15 – Delta Junction	549.1	4.7	0.0	0.0	0.0	0.0	0.0	44.3	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 16 – George Lake	582.0	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 17 – Tok Alternate	647.1	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 17 – Tok	659.3	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 18 – Beaver Creek	700.3	49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.0
Camp 18 – Beaver Creek Alternate	701.5	37.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0
Alaska Mainline Subtotal		1,520.7	186.2	0.0	0.0	0.0	0.0	121.4	0.0	0.0	0.0	0.0	0.0	1,642.0	186.1
PROJECT TOTAL		1,844.7	188.2	0.0	0.0	0.0	0.0	121.4	0.0	0.0	0.0	0.0	0.0	1,966.0	188.2


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TABLE 8.2.4-4

**Alaska Pipeline Project**


**Land Uses Affected by Construction and Operation of Construction Camps, Pipe Storage Areas, and Contractor Yards (acres) <sup>a</sup>**

[Note: APP is developing land use classifications and, therefore, the land use types may change based on the unique characteristics of the State of Alaska. Land use classifications will be updated in the final report. Further, the totals represented in the table may differ from Resource Report 1 due to available data sources used to classify land use types and will be updated in the final report.]

Segment/Borough/ Camp or Yard Name	Milepost <sup>b</sup>	Open		Forest		Agriculture		Commercial/ Industrial		Residential		Water		Total	
		Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.

<sup>a</sup> Note that while APP may need to make minor improvements (e.g., clearing, leveling, stabilizing) to some existing camp, storage area, and yard sites, thus resulting in a permanent impact, APP will not permanently maintain nor require the use of many of these sites for project operation. Therefore, the majority of operational impacts are 0.0 acre.

<sup>b</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP.

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### 8.3 PLANNED DEVELOPMENTS

Based on a review of known platted subdivisions, APP will be located within 0.25 mile of known residential and commercial developments as listed in Table 8.3-1.

TABLE 8.3-1 Alaska Pipeline Project Existing or Planned Developments Within 0.25 Mile of the Project			
Activity/Project/Borough or Census Area	Milepost (Distance and Direction from Project) <sup>a</sup>	Description	Anticipated Construction Dates
POINT THOMSON GAS TRANSMISSION PIPELINE - None -			
ALASKA MAINLINE			
Tatalina Subdivision	422.3 (308.7 feet NE of centerline)	Residential	Undeveloped (Plat recorded in 2003; APP currently unaware of any proposed construction)
Steese Highway Community	455.5 (Within right-of-way, NE and SW of centerline)	Residential and Commercial	Partially Developed (Collectively made up of U.S. Mineral Service; APP currently unaware of any proposed construction)
North Addition to the Crown Subdivision	554.0 (Within right-of-way, E of centerline)	Residential	Undeveloped (Plat recorded in 1978; APP currently unaware of any proposed construction)
Unnamed	554.5 (359.7 feet S of centerline)	Commercial	Undeveloped (Plat recorded in 2005; APP currently unaware of any proposed construction)
Brown Subdivision	565.5 (Within right-of-way, NE and SW of centerline)	Residential	Partially Developed (Plat recorded in 1978; APP currently unaware of any proposed construction)
Unnamed	619.7 (145.8 feet W of centerline)	Residential	Undeveloped (Plat recorded in 1980; APP currently unaware of any proposed construction)
Alaska Stand Alone Pipeline	0.0 to Livengood/Fairbanks	Commercial	Planned for 2014. Project currently in National Environmental Policy Act review phase. Alaska Gasline Development Corporation submitted a revised application in March 2011; State Pipeline Coordinator's Office issued right-of-way lease in July 2011
<sup>a</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP.			


Based on a review of timber sale records (BLM, State of Alaska, private entities), there are no known planned timber sales within 0.25 mile of the APP.

APP is also consulting ADOTPF to identify ADOTPF-related projects that may occur within 0.25 mile of the Project.

The details of each development are unknown at this time. APP will coordinate with the property developers in the event these or other developments occur within the same timeframe as the APP.

### 8.4 LAND OWNERSHIP AND SPECIAL MANAGEMENT AREAS


Table 8.4-1 summarizes public land ownership that will be crossed by the APP routes, and includes a summary of the percent crossed associated with the total Project length (i.e., both PT

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Pipeline and Alaska Mainline) and a summary of the percent crossed associated with the respective pipeline segment. To the extent practicable, APP has attempted to locate its Project on public lands administered by the federal and state governments. Appendix 8B identifies by MP the crossing lengths and uses of public lands that will be affected by the Project. The names and addresses of all landowners affected by APP are filed as Privileged Information under separate cover and labeled “**CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE**”.

TABLE 8.4-1 Alaska Pipeline Project Summary of Land Ownership/Management <sup>a</sup>			
[Note: APP is conducting title searches for land ownership. Therefore, the land use ownership information may change. Land ownership information will be updated in the final report.]			
Segment/Agency or Entity	Approximate Crossing Length (miles)	Percent of Total Segment Length	Percent of Total Project Length
POINT THOMSON GAS TRANSMISSION PIPELINE			
Federal Land	0.0	0%	0%
State Land			
State of Alaska	58.4	100%	7.3%
Private Land	0.0	0%	0%
PT Pipeline Subtotal	58.4	0%	7.2%
ALASKA MAINLINE			
Federal Land <sup>b</sup>			
BLM	118.6	15.9%	14.8%
FWS (Tetlin National Wildlife Refuge)	2.9	0.4%	0.4%
DOD (Eielson Air Force Base, U.S. Army-Fort Wainwright)	14.0	1.9%	1.7%
National Oceanic and Atmospheric Administration	0.8	0.1%	0.1%
U.S. Army Corps of Engineers	2.2	0.3%	0.3%
State Land <sup>b</sup>			
State of Alaska	467.2	62.7%	58.1%
ADOTPF	6.9	0.9%	0.8%
Board of Regents of the University of Alaska	4.8	0.7%	0.6%
Alaska Mental Health Trust Authority	3.2	0.4%	0.4%
Municipal Land			
Fairbanks North Star Borough	13.9	1.8%	1.7%
Private Land	110.5	14.8%	13.7%
Alaska Mainline Subtotal	745.1	100%	92.7%
GAS TREATMENT PLANT			
Bureau of Ocean Energy Management/Alaska Department of Natural Resources	Offshore disposal area	Offshore disposal area	Offshore disposal area
PROJECT TOTAL	803.5		
<p>Table summarizes areas crossed by the pipeline routes but because infrastructure associated with the GTP's development will affect land managed by a federal entity not affected by other Project activities, it has been included on the table. As listed in Table 8.2.3-1, the GTP will be constructed and operated on land owned by the State of Alaska.</p> <p><sup>a</sup> The numbers in this table have been rounded for presentation purposes.</p> <p><sup>b</sup> APP will apply for a right-of-way grant and/or lease to cross and use federal and state lands.</p>			



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Most land in Alaska is publicly owned either by the federal government or the State of Alaska. The remainder of land along the Project area is classified as private land and, therefore, is not discussed in this section. As listed in Tables 8.4.1-1 and 8.4.2-1, APP will cross a number of publicly owned and administered<sup>10</sup> lands. Each of these publicly owned and administered areas is discussed and their respective management plans, if applicable, are addressed in the following sections. These management plans reflect long-term federal and state land management decisions. They establish priorities and objectives for the use of particular portions of these managed lands. Many public lands without a designated land management purpose are used for recreation; these areas are discussed in Section 8.5. [Note: APP is currently consulting with the land management agencies on the land management plans, management objectives, project conformance, and mitigation measures necessary for the Project. Updated information will be provided in the final report.]

#### **8.4.1 FEDERALLY OWNED AND MANAGED LAND**

The federal government is the largest landowner in Alaska, owning over 60 percent of the state's total area (ADNR 2000). This acreage includes national parks, wildlife refuges, national forests, military reservations, and the National Petroleum Reserve-Alaska. The federal government also owns submerged lands that lie offshore beyond the boundary of state waters (generally offshore beyond 3 miles from the coastline). These waters are under the administrative jurisdiction of the U.S. Department of the Interior, Bureau of Ocean Energy Management (BOEM). Federal lands in the Project area are owned by the United States and managed by BLM, FWS, National Oceanic and Atmospheric Administration (NOAA), U.S. Army Corps of Engineers (COE), and DOD.

<sup>10</sup> Land that may not be owned by a federal or state entity, but regardless is provided management authority.

TABLE 8.4.1-1

**Alaska Pipeline Project  
Federal Lands Crossed by the Project<sup>a, b</sup>**

Segment/Borough or Census Area	Begin Milepost <sup>c</sup>	End Milepost	Crossing Length (miles)	Name	Management Agency
POINT THOMSON PIPELINE (PT Pipeline)					
North Slope Borough				- None -	
ALASKA MAINLINE					
North Slope Borough	122.0	122.4	0.4	Central Yukon Field Office	BLM
	123.5	150.2	26.7	Central Yukon Field Office	BLM
	155.4	161.9	6.5	Central Yukon Field Office	BLM
	168.3	182.8	14.5	Central Yukon Field Office	BLM
	183.5	185.2	1.7	Central Yukon Field Office	BLM
Yukon-Koyukuk Census Area	185.2	221.5	36.3	Central Yukon Field Office	BLM
	222.6	223.5	0.9	Central Yukon Field Office	BLM
	224.1	235.5	11.4	Central Yukon Field Office	BLM
	246.4	248.9	2.5	Central Yukon Field Office	BLM
	257.4	258.4	1.0	Central Yukon Field Office	BLM
	279.9	281.1	1.2	Central Yukon Field Office	BLM
	283.1	285.4	2.3	Central Yukon Field Office	BLM
	308.5	311.8	3.3	Central Yukon Field Office	BLM
	337.0	338.1	1.1	Central Yukon Field Office	BLM
	339.1	340.2	1.1	Eastern Interior Field Office	BLM
	357.6	360.2	2.6	Eastern Interior Field Office	BLM
	421.1	421.1	<0.1	Eastern Interior Field Office	BLM
Fairbanks North Star Borough	448.3	449.1	0.8	Eastern Interior Field Office	BLM
	454.9	455.4	0.5	Eastern Interior Field Office	BLM
	456.8	457.6	0.8	Unknown	NOAA
	457.6	457.8	0.2	Eastern Interior Field Office	BLM
	470.0	472.6	2.6	Eastern Interior Field Office	BLM
	473.9	476.1	2.2	Chena River Lakes Flood Control Project	COE
	476.7	490.5	13.8	Fort Wainwright and Eielson Air Force Base (AFB)	DOD U.S. Army and U.S. Air Force
	496.4	496.6	0.2	Eastern Interior Field Office	BLM
Southeast Fairbanks Census Area	552.3	552.5	0.2	Eastern Interior Field Office	BLM
	554.0	554.6	0.6	Eastern Interior Field Office	BLM
	702.1	702.3	0.2	Unknown	Military
	737.3	737.4	0.1	Eastern Interior Field Office	BLM
	742.2	745.1	2.9	Tetlin National Wildlife Refuge	FWS
Alaska Mainline Subtotal			138.5		
PROJECT TOTAL			138.5 <sup>d</sup>		


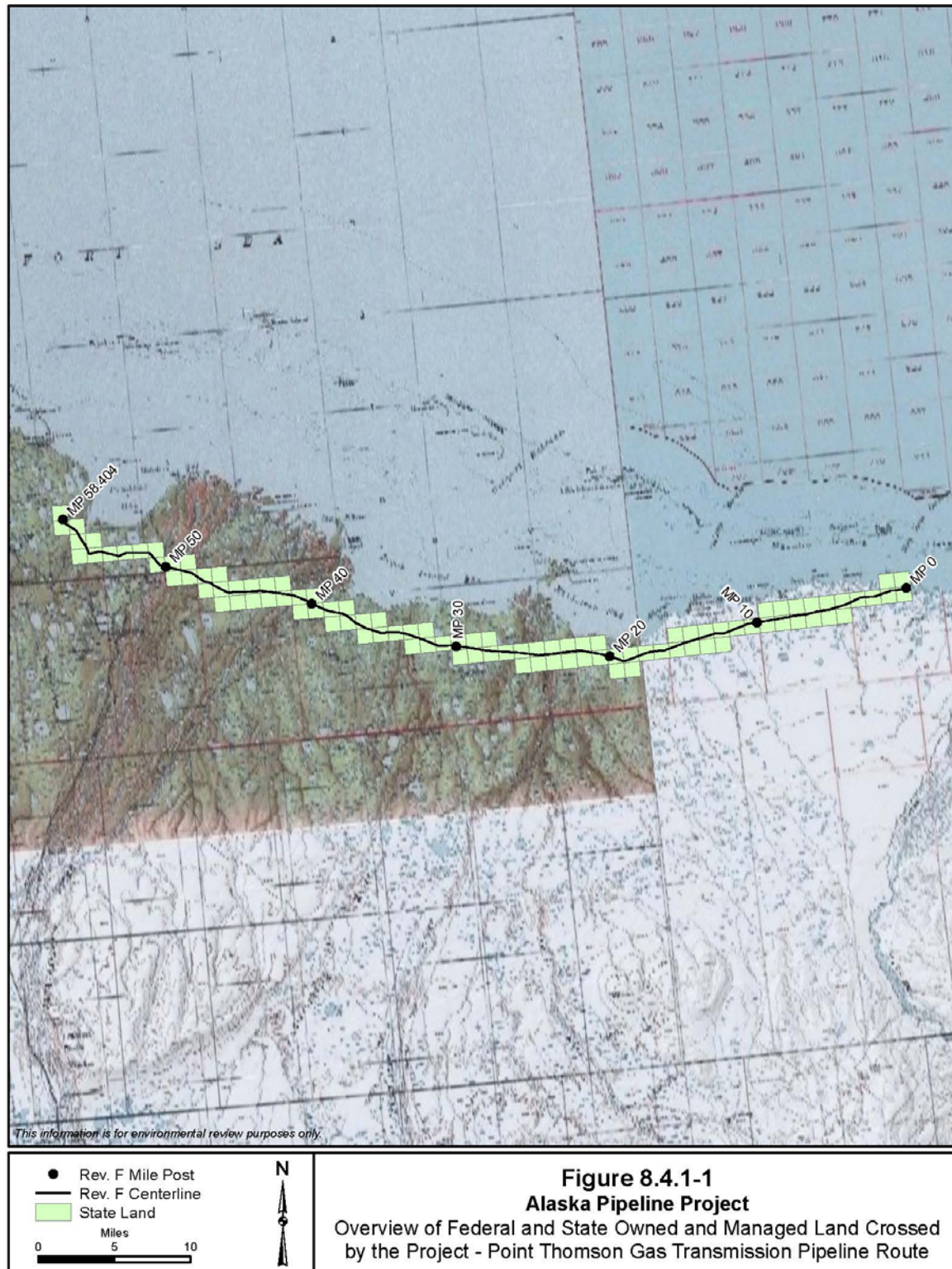
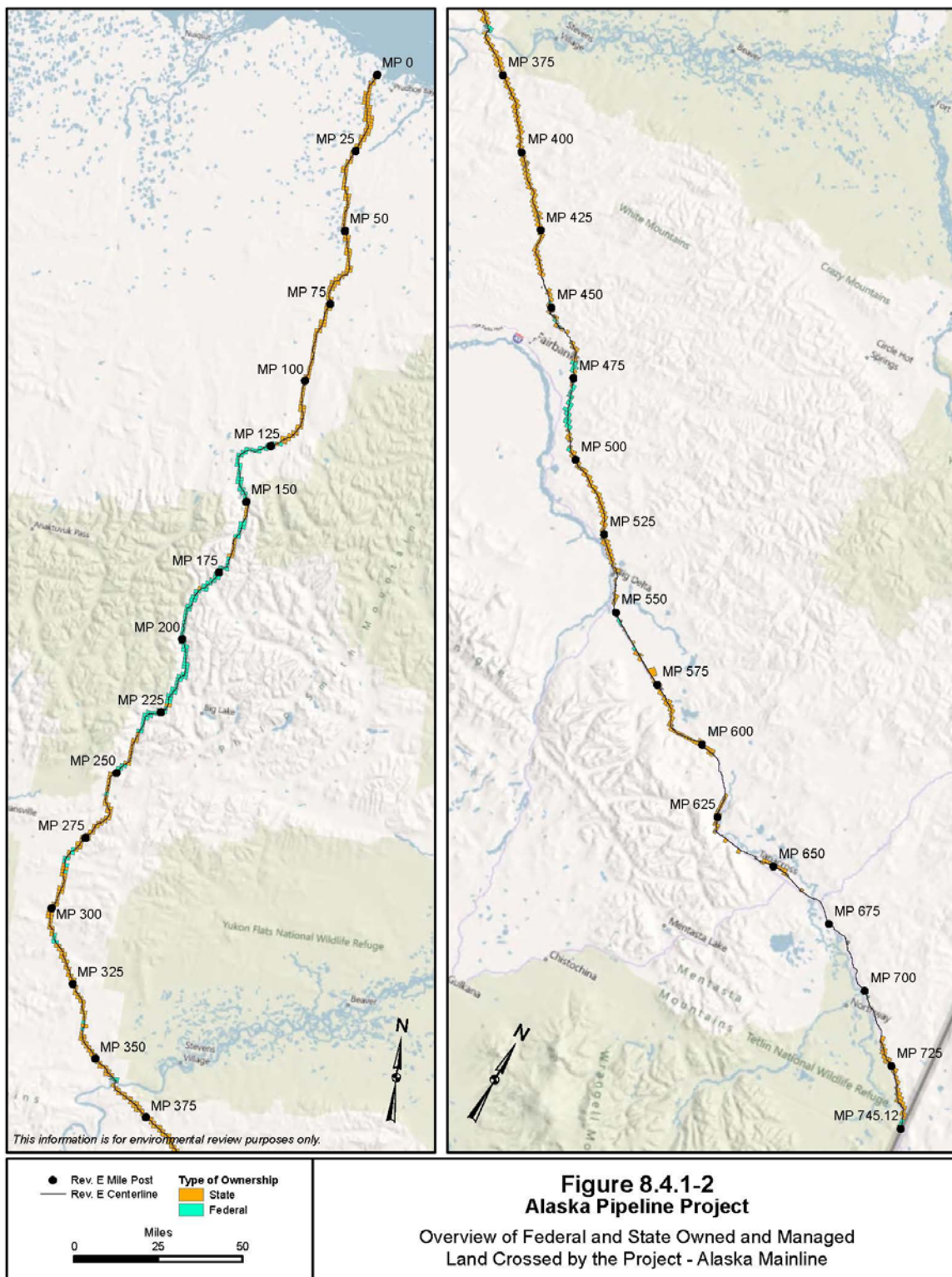
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TABLE 8.4.1-1					
Alaska Pipeline Project Federal Lands Crossed by the Project <sup>a, b</sup>					
Segment/Borough or Census Area	Begin Milepost <sup>c</sup>	End Milepost	Crossing Length (miles)	Name	Management Agency
<sup>a</sup> In addition to the federal management agencies listed in the table, the dredged material placement area associated with the GTP may be located within federal waters (refer to Section 8.4.1). No additional federal land holders in addition to those listed in the table are located within 0.25 mile of the APP. <sup>b</sup> Areas crossed also include all Aboveground Facilities and Associated Infrastructure that occurs within or near the pipelines' construction workspace areas at a given milepost. <sup>c</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP. <sup>d</sup> The numbers in this table have been rounded for presentation purposes. As a result, the totals may not reflect the exact sum of the addends in all cases.					

In addition to land ownership, APP identified 100-year floodplains through the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps available for the Project area. APP has considered the location of the Project in relation to Federal Emergency Management Agency-identified floodplains and or constraints to protect floodplains as practicable. The pipeline will be located underground and, therefore, the floodplain will not be modified except temporarily during construction activities. APP has located Aboveground Facilities outside of floodplains where practicable, however, MLBV AK33 at AMP 533.4 and provisions for intermediate gas delivery points at Fairbanks and Delta Junction (refer to Table 8.2.3-1) may be built within a 100-year floodplain. In these locations, APP will pursue the appropriate mitigation, which may include: 1) placing fill at the sites to raise the elevation of the facilities above the 100-year floodplain; or 2) considering different configurations that will allow relocation of the Aboveground Facilities outside of floodplains. Section 6.4 of Resource Report 6 discusses geologic hazards related to flooding.







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#### 8.4.1.1 Bureau of Land Management Lands

At various locations along the Project, the Alaska Mainline will cross lands owned by the United States and administered by BLM (refer to Table 8.4.1-1). These include lands within the Arctic, Central Yukon, and Eastern Interior field offices of the greater Fairbanks District of BLM. As prescribed by the Federal Lands Policy and Management Act, land use plans shall be developed for public land “to establish public land policy; to establish guidelines for its administration; to provide for the management, protection, development, and enhancement of the public lands; and for other purposes” (BLM 2001). The following summarizes the RMPs for BLM-administered areas affected by the Project.

#### Resource Management Plans

##### Arctic Field Office and Central Yukon Field Office

The APP will be located within areas managed by the Arctic and Central Yukon Area field offices of BLM and in an area managed by BLM’s Utility Corridor RMP/EIS (1991). The utility corridor, in which the APP will be located between approximately AMP 61.5 and AMP 367.7 (refer to Figure 8.4.1-3), was established by Public Land Order 5250 in December 1971 and provides an essential component of the national domestic oil and gas transportation system.

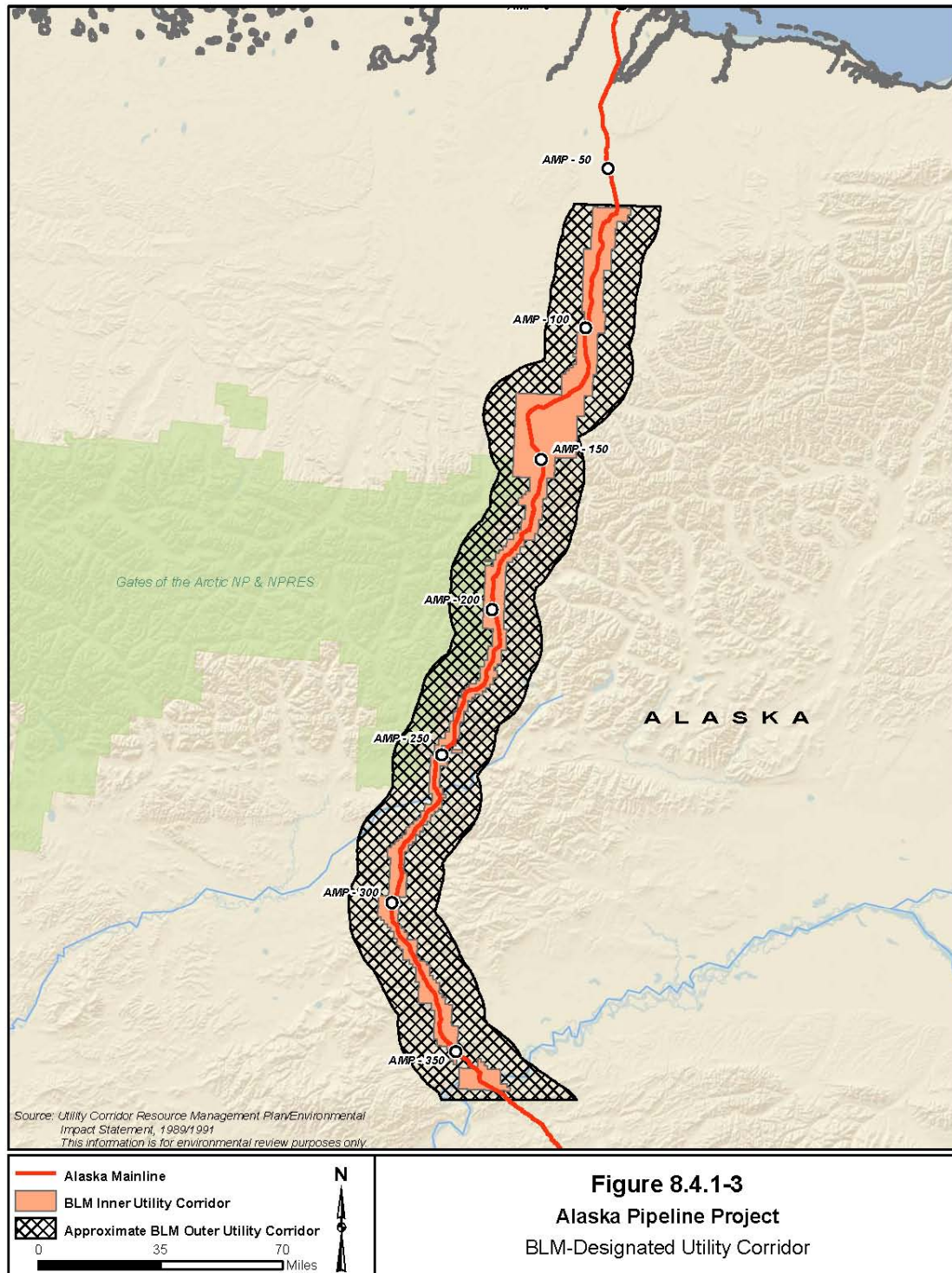
The primary management direction and use of BLM-administered lands within the utility corridor as discussed in the RMP/EIS is for energy transportation; actions or activities potentially adverse to existing and future transportation systems are avoided (BLM 1991).


There are three federally designated corridors within the utility corridor’s planning area to accommodate rights-of-way (BLM 1991):

- Alaska Utility Corridor – a 6- to 24-mile-wide corridor that runs north-south through most of the planning area and consists of an “inner” and “outer” corridor, which is described further below.
- Section 201(4)(b) of the Alaska National Interest Lands Conservation Act (ANILCA) Corridor – provides surface access for transportation purposes across public lands from the Ambler Mining District to the Dalton Highway.
- Section 1431(G) of ANILCA Corridor – a 6- to 12-mile-wide corridor established across Central Arctic Management Area (CAMA) in order to provide the Arctic Slope Regional Corporation (ASRC) access, including pipelines, across public lands from the Kurupa Lake and Killik River areas east to the utility corridor.

The Project area is located within the Alaska Utility Corridor. As mentioned above, the utility corridor is comprised of an “inner” and “outer” corridor. The majority of the Alaska Mainline and its Aboveground Facilities and Associated Infrastructure will be located within the inner utility corridor. Various non-energy transportation activities are restricted within the inner corridor (e.g., mineral resource development) and, with a few exceptions (e.g., Areas of Critical Environmental Concern [ACECs]), the area is primarily devoted to the transportation of energy resources.





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The inner corridor also generally corresponds to the Dalton Highway Recreation Management Area (RMA), which includes lands within the corridor adjacent to existing roadways, and the Dalton Corridor RMA (BLM 1991), which includes the remainder of the utility corridor. Primary recreational activities of the Dalton Highway RMA include road-related sightseeing, lodging, camping, interpretive services, and fishing. Primary recreational activities of the Dalton Corridor RMA include hunting, fishing, backpacking, and snowmobiling (known as snowmachining in Alaska).

#### Eastern Interior Field Office

Between approximate AMP 360.1 and AMP 745.1, the APP will be located within areas managed by the Eastern Interior Field Office of BLM and an area managed by BLM's Fortymile Management Framework Plan (1980). The plan is currently being revised and will be replaced by the Eastern Interior RMP (BLM 2011a). However, for the purposes of this report, and because issuance of the new RMP is pending, the 1980 Fortymile Management Framework Plan is referenced.

The Fortymile Management Framework Plan provides management objectives and decisions regarding issues related to lands, minerals, forest products, range management, watershed, terrestrial and aquatic wildlife, recreation, cultural resources, visual resource management (VRM), and wilderness management. While several of the management objectives focus on protection of wildlife and aquatic species, establishing recreational opportunities, maintaining and improving the area's visual quality, and managing some areas as "Potential Wilderness Study Areas," the Fortymile Management Framework Plan also provides provisions for providing land for intensive use and transportation systems.

### **Special Management Areas**

#### Areas of Critical Environmental Concern

Some BLM lands have been designated as ACECs. ACECs are areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards (43 C.F.R. 1601.0-5). Generally, development activities and future energy transportation systems are allowed.

The APP Alaska Mainline will cross two ACECs, the Toolik Lake Research Natural Area (RNA) ACEC and the Galbraith Lake Outstanding Natural Area (ONA) ACEC, as listed in Tables 8.4.1-2 and 8.4.1-3.



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TABLE 8.4.1-2					
Alaska Pipeline Project Areas of Critical Environmental Concern Crossed by the Project					
Segment/Borough or Census Area	Begin Milepost <sup>a</sup>	End Milepost	Crossing Length (miles)	Area of Critical Environmental Concern	Importance <sup>b</sup>
POINT THOMSON GAS TRANSMISSION PIPELINE					
North Slope Borough				- None -	
ALASKA MAINLINE					
North Slope Borough	127.8	140.3	12.5	Toolik Lake Research Natural Area	General research; botanical/sensitive species.
	141.9	153.3	11.4	Galbraith Lake Outstanding Natural Area	Historic and cultural resources; lambing areas and mineral licks for Dall sheep; scenic value; geology and paleontology.
<sup>a</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP. <sup>b</sup> BLM 1991.					

TABLE 8.4.1-3				
Alaska Pipeline Project Aboveground Facilities and Associated Infrastructure Within Areas of Critical Environmental Concern				
Segment/Facility/ Borough or Census Area	Identification	Secondary Name (if applicable)	Milepost (or Nearest Approx.) <sup>a</sup>	Area of Critical Environmental Concern <sup>b</sup>
POINT THOMSON GAS TRANSMISSION PIPELINE				
North Slope Borough				- None -
ALASKA MAINLINE				
Compressor Stations and MLBVs				
North Slope Borough	MLBV-AK9 <sup>c</sup>		131.5	Toolik Lake RNA
	MLBV-AK10 <sup>c</sup>		149.9	Galbraith Lake ONA
	Galbraith Lake Compressor Station <sup>c</sup>		150.4	Galbraith Lake ONA
Storage Yards				
North Slope Borough	Galbraith Lake Storage Yard <sup>c</sup>		144.3	Galbraith Lake ONA
Construction Camps				
North Slope Borough	Camp 4 – Galbraith Lake <sup>c, d</sup>		145.7	Galbraith Lake ONA
Borrow Sites				
North Slope Borough	Alternate 65-9-059-2		130.1 <sup>d</sup>	Toolik Lake RNA
	Alternate Site 38 Extra		139.4 <sup>d</sup>	Toolik Lake RNA
	Galbraith Airstrip		145.5	Galbraith Lake ONA
	65-9-056-2		151.4 <sup>d</sup>	Galbraith Lake ONA
<sup>a</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP. <sup>b</sup> Area of ACEC affected by each facility is as listed in the land use impacts discussed in Section 8.2. <sup>c</sup> Includes a helipad at this location. <sup>d</sup> Area is existing and has been previously disturbed/used.				

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#### *Toolik Lake Natural Research Area*

As listed in Table 8.4.1-2, APP will cross the Toolik Lake RNA ACEC and, as listed in Table 8.4.1-3, various MLBVs and borrow sites will also be located within the Toolik Lake RNA ACEC. Both of the borrow sites proposed for use within the Toolik Lake RNA ACEC are existing sites that have been previously disturbed/used.

The Toolik Lake RNA ACEC has been designated to protect a natural land and tundra biome used for Arctic natural resources research. While BLM's RMP/EIS (1991) acknowledges that energy transportation is the primary function of the utility corridor across this ACEC, protection of the area is to occur to the extent practical to protect data and research projects.

#### *Galbraith Lake Outstanding Natural Area*

As listed in Table 8.4.1-2, APP will cross the Galbraith Lake ONA ACEC and, as listed in Table 8.4.1-3, the Galbraith Lake Compressor Station, a storage yard and construction camp, and borrow sites will be located within the Galbraith Lake ONA ACEC. Of the infrastructure proposed for Project use, the construction camp at the Galbraith Lake ONA ACEC and one borrow site has been previously disturbed/used.

The Galbraith Lake ONA ACEC is the largest of the five ACECs within the Central Yukon Field Office region. It encompasses the Atigun River Valley and portions of the mountains on both sides of the valley. The Galbraith Lake ONA ACEC also includes Galbraith Lake and several drainages that feed the lake. The area is managed to protect historical and archeological sites, critical wildlife habitat, paleontological and geological sites, scenic values, and possibly, rare and sensitive plants.

### **8.4.1.2 U.S. Fish and Wildlife Service Lands**

#### **Tetlin National Wildlife Refuge**

The current APP route crosses land that is part of the Tetlin National Wildlife Refuge (NWR) managed by the FWS (refer to Table 8.4.1-1). The Tetlin NWR is located northeast of the Alaska Range, adjacent to the U.S.-Canada border, and is bordered to the south by Wrangell-St. Elias National Park and Preserve, Canada to the east, and the Alaska Highway along its northeast border. The 932,000-acre refuge consists of about 700,000 acres of federally owned land, managed by FWS. The remaining area consists of lands owned by Native corporations, the State of Alaska, or private entities. The Tetlin NWR was established in 1980 as part of ANILCA. The primary purposes of the refuge are to: conserve fish and wildlife populations and habitats in their natural diversity; provide interpretation and environmental education to the public; and provide subsistence hunting opportunities to rural inhabitants (FWS 2011b).


[Note: APP is actively engaged with various agencies on options and details associated with access to the three mile segment of Tetlin NWR managed by the FWS that the APP corridor crosses. Updated information regarding access will be provided in the final report.]

### **8.4.1.3 U.S. Department of Defense Land**

#### **Fort Wainwright and Eielson Air Force Base**

As listed in Table 8.4.1-1, APP will cross U.S. Army Fort Wainwright Yukon Command Training Site and the U.S. Air Force Eielson Air Force Base. These military reservations were first built in 1940 as a cold weather test stations and have since been used interchangeably as Air Force and Army facilities. Most recently, the U.S. Army has used Fort Wainwright.



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The Military Lands Withdrawal Act of 1986 (P.L. 99-606) required the U.S. Department of the Interior to prepare land use plans for the Fort Wainwright Maneuver Area, more commonly known as the Yukon Maneuver Area. The plan, entitled the Fort Wainwright Yukon Maneuver Area Proposed RMP/Final EIS, was approved in 1995, and is designed to determine the nonmilitary activities and uses Fort Wainwright can support and still allow for the military's training functions (BLM 1995). The plan addresses the possibilities for wildlife and wildlife habitat protection, recreational use, and mineral development.

Management prescriptions common to all areas include considerations for access; air, soil, water, and vegetation; fish and wildlife habitat; forestry; cultural resources; recreation; lands; rights-of-way; minerals; and subsistence. Additionally, 17 actions are discussed in the plan specific to access, vegetation, visual resources, fish and wildlife habitat, forestry, cultural resources, trespass, recreation, lands, rights-of-way, minerals, and fire management.

#### **8.4.1.4 National Oceanic and Atmospheric Administration Lands**

As listed in Table 8.4.1-1, APP will cross land owned by the United States and managed by NOAA. Use and management of these lands is currently being investigated by APP.

#### **8.4.1.5 U.S. Army Corps of Engineers Lands**

As listed in Table 8.4.1-1, the APP will cross the Chena River Lakes Flood Control Project footprint, which is operated by the COE. The project provides protection to Fairbanks, Alaska, and adjacent areas, including Fort Wainwright, from recurring flood damage from the Chena and Tanana Rivers (COE 2011). Recreational opportunities offered by the area include non-motorized uses such as horseback riding, biking, hiking, picnicking, hunting, and wildlife watching (Fairbanks, Alaska 2011). Land management plans specific to the area beyond flood control are currently not available.

#### **8.4.1.6 Bureau of Ocean Energy Management**

As discussed in Section 1.3.3.1 of Resource Report 1, APP has identified a potential off-shore disposal site that is approximately 4 miles northeast of DH-2 in waters under the authority of the BOEM (refer to Appendix 1B of Resource Report 1).

#### **8.4.1.7 Construction and Operation Impacts and Mitigation**

Table 8.4.1-4 summarizes the temporary and permanent impacts on federal lands affected by construction and operation of the Project.

TABLE 8.4.1-4

**Alaska Pipeline Project  
Land Use Impacts on Federal Lands Affected by the Project <sup>a</sup>**

Segment/Borough or Census Area	Begin Milepost <sup>b</sup>	End Milepost	Area	Impacts (acres) <sup>c, d</sup>		Existing Land Use(s)	
				Const.	Oper.		
POINT THOMSON GAS TRANSMISSION PIPELINE							
North Slope Borough		- None -					
ALASKA MAINLINE							
North Slope Borough	122.0	122.4	BLM	6.5	3.7	Open Land	
	123.5	150.2	BLM	380.3	217.3	Open Land	
	155.4	161.9	BLM	68.0	38.9	Open Land	
	168.3	182.8	BLM	199.8	114.2	Open Land	
	183.5	185.2	BLM	22.4	12.8	Open Land	
Yukon-Koyukuk Census Area	185.2	221.5	BLM	381.1	217.9	Open Land	
	222.6	223.5	BLM	9.6	5.5	Open Land	
	224.1	235.5	BLM	168.5	96.3	Open Land	
	246.4	248.9	BLM	35.3	20.2	Open Land	
	257.4	258.4	BLM	8.4	4.8	Open Land	
	279.9	281.1	BLM	22.2	12.7	Open Land	
	283.1	285.4	BLM	26.2	15.0	Open Land	
	308.5	311.8	BLM	43.6	24.9	Open Land	
	337.0	338.1	BLM	11.5	6.6	Open Land	
	339.1	340.2	BLM	10.9	6.2	Open Land	
	357.6	359.9	BLM	36.3	20.8	Open Land	
	421.1	421.1	BLM	11.6	6.1	Open Land	
	Fairbanks North Star Borough	448.3	449.1	BLM	12.4	7.1	Open Land
		454.9	455.4	BLM	6.6	3.8	Open Land
		456.8	457.6	NOAA	22.7	13.0	Forest
457.6		457.7	BLM	2.9	1.6	Open Land	
470.0		472.6	BLM	32.4	18.5	Open Land	
473.9		474.6	COE	8.3	4.8	Open Water	
474.6		474.8	COE	2.0	1.2	Commercial/ Industrial	
474.8		475.7	COE	7.8	4.5	Open Water	
474.9		476.1	COE	7.9	4.5	Forest	
476.7		479.5	DOD, U.S. Army	31.9	18.2	Commercial/ Industrial	
479.5		480.6	DOD, U.S. Air Force	12.1	6.9	Commercial/ Industrial	
480.6		482.2	DOD, U.S. Army	17.9	10.2	Commercial/ Industrial	
482.2		483.1	DOD, U.S. Air Force	10.7	6.1	Commercial/ Industrial	
483.1		483.2	DOD, U.S. Army	1.5	0.9	Commercial/ Industrial	
483.2		487.2	DOD, U.S. Air Force	50.6	28.9	Commercial/ Industrial	





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TABLE 8.4.1-4						
Alaska Pipeline Project Land Use Impacts on Federal Lands Affected by the Project <sup>a</sup>						
Segment/Borough or Census Area	Begin Milepost <sup>b</sup>	End Milepost	Area	Impacts (acres) <sup>c, d</sup>		Existing Land Use(s)
				Const.	Oper.	
Southeast Fairbanks Census Area	487.2	490.5	DOD, U.S. Army	49.6	28.3	Commercial/ Industrial
	496.4	496.6	BLM	3.0	1.7	Open Land
	552.3	552.5	BLM	10.4	5.9	Open Land
	554.0	554.6	BLM	10.5	6.1	Open Land
	702.1	702.3	Military (Unknown)	3.3	1.9	Forest
	737.3	737.4	BLM	1.1	0.6	Open Land
	742.2	745.1	U.S. Fish and Wildlife Service	55.4	18.3	Forest
Alaska Mainline Subtotal				1,803.2	1,016.9	
PROJECT TOTAL				1,803.2 <sup>e</sup>	1,016.9 <sup>e</sup>	
<sup>a</sup> Areas affected also include all Aboveground Facilities and Associated Infrastructure that occurs within or near the pipelines' construction workspace areas at a given milepost. Refer to Tables 8.2.3-1, 8.2.4-1 through 8.2.4-4 and Appendices 8B and 8C for federal land ownership and land use impacts associated with Aboveground Facilities and Associated Infrastructure. <sup>b</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP. <sup>c</sup> Pipeline right-of-way construction impacts are based on a 175-foot-wide temporary right-of-way. Operational impacts are based on a 100-foot-wide permanent right-of-way. <sup>d</sup> The numbers in this table have been rounded for presentation purposes. As a result, the totals may not reflect the exact sum of the addends in all cases. <sup>e</sup> In addition to the federal management agencies listed in the table, the dredged material placement area associated with the GTP may be located at least partially within federal waters and will affect a total of 285.0 acres of open water.						

The APP will cross federal lands using the typical and, as appropriate, special pipeline construction procedures described in Sections 1.6.2 and 1.6.3, respectively, of Resource Report 1. Impacts and mitigation for specific resources such as wetlands, waterbodies, and wildlife habitats located on federal lands are more fully discussed in Resource Reports 2 and 3. This report discusses impacts and mitigation related to recreation (refer to Section 8.5) and visual resources (refer to Section 8.8). APP will follow its Project-specific Plan and Wetland and Waterbody Construction and Mitigation Procedures (Procedures) to mitigate impacts of the Project on the federal lands (refer to Appendices 1J and 1K of Resource Report 1, respectively).

Within the area managed by the Utility Corridor RMP/EIS, the APP will be located within the designated "inner" or "outer" utility corridor. As discussed in Section 8.4.1, the primary management direction and use of BLM-administered lands within the utility corridor is for energy transportation. Additionally, APP has attempted to locate its Associated Infrastructure at locations previously disturbed and/or used for other projects. Therefore, APP is in conformance with the management objectives of the Utility Corridor RMP/EIS. Within the area managed by the Fortymile Management Framework Plan, transportation corridors are also a recognized management use.

As discussed in Section 8.4.1, the DOD's Fort Wainwright Yukon Maneuver Area and Eielson Air Force Base are managed under the Fort Wainwright Yukon Maneuver Area RMP/EIS. The RMP/EIS states that the areas allow for rights-of-way provided they do not conflict with the

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military's mission. Construction and operation of APP is not anticipated to conflict with military uses of the Fort Wainwright Yukon Maneuver Area and Eielson Air Force Base.

APP is working with the various federal agencies to achieve conformance with the applicable standards and guidelines in the Utility Corridor, Fortymile, and Fort Wainwright RMPs, including ACEC areas. APP will work with the BOEM regarding permitting requirements for the offshore disposal site.

APP will also complete a Plan of Development in support of its Right-of-Way Grant and Temporary Use Permit application to cross federal lands to address specific construction or operation measures that will be implemented to promote conformance with the federal land management agencies' relevant management plans.

#### 8.4.2 STATE-OWNED AND MANAGED LAND

As part of statehood, the State of Alaska was entitled to select land from the federal government as an economic base for the state, following specific guidelines (ADNR 2008). As of 2000, the state had received patents to approximately 85 percent of its total land selections (ADNR 2000). ADNR has administrative jurisdiction over the state lands (including tidelands, submerged lands within 3 miles of the coast, and barrier islands) and state waters (including offshore waters within 3 miles of the coast, fresh water lakes, rivers, and streams).

Some of the lands affected by the APP are classified as T/A. These lands are under the management of the State of Alaska but have yet to be deeded to the state by a federal entity.

The APP will cross lands owned and managed by the State of Alaska, ADOTPF, Board of Regents of the University of Alaska, and Alaska Mental Health Trust Authority as listed in Table 8.4.2-1.

TABLE 8.4.2-1				
Alaska Pipeline Project State Lands Crossed by the Project <sup>a, b</sup>				
Segment/Borough or Census Area	Begin Milepost <sup>c</sup>	End Milepost	Crossing Length (miles)	Management Agency
POINT THOMSON GAS TRANSMISSION PIPELINE				
North Slope Borough	0.0	58.4	58.4	State of Alaska, ADNR
PT Pipeline Subtotal			58.4	
ALASKA MAINLINE				
North Slope Borough	0.0	39.8	39.8	State of Alaska, ADNR
	39.8	41.9	2.1	ADOTPF
	41.9	54.3	12.4	State of Alaska, ADNR
	54.3	55.3	1.1	ADOTPF
	55.4	56.4	1.0	State of Alaska, ADNR
	56.4	57.4	1.0	ADOTPF
	57.4	67.0	9.6	State of Alaska, ADNR/State of Alaska T/A
	67.0	67.1	0.1	ADOTPF
	67.1	122.0	54.9	State of Alaska, ADNR/State of Alaska T/A
	122.4	123.5	1.1	State of Alaska T/A
	150.2	155.4	5.2	State of Alaska T/A
	161.9	168.3	6.4	State of Alaska T/A
	182.8	183.5	0.7	State of Alaska T/A

TABLE 8.4.2-1

**Alaska Pipeline Project  
State Lands Crossed by the Project<sup>a, b</sup>**

Segment/Borough or Census Area	Begin Milepost <sup>c</sup>	End Milepost	Crossing Length (miles)	Management Agency
Yukon-Koyukuk Census Area	221.5	222.6	1.1	State of Alaska T/A
	235.5	246.4	10.9	State of Alaska, ADNR/State of Alaska T/A
	248.9	275.6	25.7	State of Alaska T/A
	275.6	275.8	0.2	ADOTPF
	275.8	279.9	4.1	State of Alaska T/A
	281.1	283.1	2.0	ADOTPF
	285.4	308.5	23.1	State of Alaska T/A
	311.8	337.0	25.2	State of Alaska T/A
	338.1	339.1	1.1	State of Alaska T/A
	340.2	357.6	17.5	State of Alaska T/A
Fairbanks North Star Borough	360.2	439.9	79.7	State of Alaska, ADNR/State of Alaska T/A
	444.4	445.6	1.1	State of Alaska, ADNR
	446.2	446.2	0.1	State of Alaska, ADNR
	447.7	448.3	0.7	State of Alaska, ADNR
	449.1	449.1	0.0	State of Alaska T/A
	451.5	451.8	0.3	State of Alaska, ADNR
	451.9	452.9	1.0	Board of Regents of the University of Alaska
	452.9	453.2	0.4	State of Alaska, ADNR
	453.6	454.1	0.5	Alaska Mental Health Trust Authority
	454.1	454.8	0.7	State of Alaska, ADNR
	455.4	455.4	0.0	Alaska Mental Health Trust Authority
	455.8	456.5	0.6	Alaska Mental Health Trust Authority
	456.5	456.8	0.3	Board of Regents of the University of Alaska
	457.8	457.9	0.1	Alaska Mental Health Trust Authority
	457.9	459.0	1.1	State of Alaska, ADNR
	460.2	460.5	0.3	Alaska Mental Health Trust Authority
	463.5	473.5	7.5	State of Alaska, ADNR
	473.5	473.9	0.4	Alaska Mental Health Trust Authority
	476.1	476.7	0.6	Alaska Mental Health Trust Authority
	490.5	494.6	4.1	State of Alaska, ADNR
Southeast Fairbanks Census Area	495.5	495.5	0.0	ADOTPF
	495.6	496.4	0.8	State of Alaska T/A
	496.6	523.6	26.9	State of Alaska, ADNR/State of Alaska T/A
	523.7	537.4	13.7	State of Alaska, ADNR
	537.4	537.9	0.5	Alaska Mental Health Trust Authority
	537.9	538.2	0.3	State of Alaska, ADNR
	539.8	540.5	0.7	State of Alaska, ADNR
	540.6	540.7	0.1	State of Alaska, ADNR
	541.1	541.2	0.1	State of Alaska, ADNR
	541.6	542.7	1.1	State of Alaska, ADNR
	543.3	543.9	0.6	State of Alaska, ADNR
	544.4	546.3	1.9	Board of Regents of the University of Alaska



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TABLE 8.4.2-1				
Alaska Pipeline Project State Lands Crossed by the Project <sup>a, b</sup>				
Segment/Borough or Census Area	Begin Milepost <sup>c</sup>	End Milepost	Crossing Length (miles)	Management Agency
	546.3	546.6	0.3	State of Alaska, ADNR
	546.6	547.5	0.9	Board of Regents of the University of Alaska
	549.0	549.1	0.1	Alaska Mental Health Trust Authority
	549.4	555.5	0.8	State of Alaska, ADNR
	560.3	561.0	0.7	Board of Regents of the University of Alaska
	563.9	564.8	0.9	State of Alaska T/A
	565.1	578.2	13.1	State of Alaska, ADNR/State of Alaska T/A
	578.9	579.4	0.6	State of Alaska, ADNR
	580.0	588.4	8.4	State of Alaska, ADNR/State of Alaska T/A
	588.4	588.8	0.4	ADOTPF
	588.8	604.6	15.8	State of Alaska, ADNR/State of Alaska T/A
	610.4	610.4	0.1	State of Alaska, ADNR
	617.5	629.5	12.0	State of Alaska, ADNR
	645.8	646.0	0.2	State of Alaska, ADNR
	646.2	655.4	9.1	State of Alaska, ADNR
	660.8	661.5	0.7	State of Alaska, ADNR
	683.6	683.9	0.2	State of Alaska T/A
	716.2	718.8	2.6	State of Alaska, ADNR/State of Alaska T/A
	718.9	735.1	16.2	State of Alaska, ADNR/State of Alaska T/A
	735.5	737.3	1.8	State of Alaska T/A
	737.4	741.2	3.8	State of Alaska, ADNR/State of Alaska T/A
	741.5	742.2	0.7	State of Alaska T/A
Alaska Mainline Subtotal			482.1	
PROJECT TOTAL			540.5 <sup>d</sup>	
<sup>a</sup> Each crossing location is also located within 0.25 mile of the same state land management agency identified in the ownership column. No additional state land holders in addition to those listed in the table are located within 0.25 mile of the APP. <sup>b</sup> The GTP is located on land owned and managed by the State of Alaska. Areas crossed also include all Aboveground Facilities and Associated Infrastructure that occurs within or near the pipelines' construction workspace areas at a given milepost. <sup>c</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP. <sup>d</sup> The numbers in this table have been rounded for presentation purposes. As a result, the totals may not reflect the exact sum of the addends in all cases. <sup>d</sup> In addition to the state management agencies listed in the table, the dredged material placement area associated with the GTP may be located within state waters and will affect a total of 285.0 acres of open water. T/A - tentatively assigned. Refer to Section 8.4.2 for a description of this classification.				

#### 8.4.2.1 Alaska Department of Natural Resources State-Owned Lands

The ADNR has been charged by the Alaska Legislature with the management of state-owned lands. The State Pipeline Coordinator's Office (SPCO) within ADNR has primary responsibility for land use planning associated with Right-of-Way Leases for APP. There are currently over a dozen areas of Alaska covered by management plans, which are intended to establish goals, policies, management intent, and guidelines for state lands; allocate the use of state land through plan designations, and include recommendations to retain or sell land, open or close areas to development, and establish special land use designations (ADNR Division of Mining, Land and Water [DMLW] 2011a).

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All lands within the planning boundaries north of 68° North latitude, known as the CAMA, are in the North Slope Borough. Most of the land in the CAMA is owned by the State of Alaska and ASRC, as well as several Native Village Corporation parcels. Very few private interests such as private lands or mining claims exist in this area (BLM 1991). The PT Pipeline and related Aboveground Facilities and Associated Infrastructure will be located entirely within the CAMA. The Alaska Mainline will cross state-owned land within the CAMA between approximate AMP 0.0 and AMP 185.2. While a site-specific plan is underway for the North Slope area, which includes CAMA that may classify up to 32,000 acres of land in the area and identify lands that are suitable for conveyance to the North Slope Borough, the planning process is ongoing and no plan has been issued to date (ADNR DMLW 2011a).

The APP will cross state-owned land within the Tanana Basin Area between AMP 401.0 and AMP 620.0. Land use management planning within the area is covered by the Tanana Basin Area Plan (ADNR 1991). This plan is presently being revised for the eastern and western portions and will be replaced by two separate regional plans: Yukon-Tanana Area Plan and Eastern Area Tanana Plan (ADNR DMLW 2011a). However, for the purposes of this report, and because issuance of the new land management plans is pending, the 1991 Tanana Basin Area Plan is referenced. As of 2010, there are no other land management plans for state lands that apply to other parts of the Project (e.g., area generally north of Fairbanks) (ADNR DMLW 2010).

The Tanana Basin Area Plan for State Lands includes guidelines for transportation routes, which includes utilities, and a corridor that appears to include the APP route (i.e., from Fairbanks via the Richardson/Alaska Highway and Tanana River corridor to Delta Junction and the Canada border). Based on a review of the area plan, APP will cross subregions 1, 2, 6, and 7 of the Tanana Basin Area, as listed in Table 8.4.2-2.

TABLE 8.4.2-2				
Alaska Pipeline Project Tanana Basin Area Regions and Subregions Crossed by the Project <sup>a</sup>				
Segment/Borough or Census Area/Region	Approximate Begin Milepost <sup>b</sup>	Approximate End Milepost	Crossing Length (miles)	Sub-region
POINT THOMSON GAS TRANSMISSION PIPELINE		- None -		
ALASKA MAINLINE				
North Slope Borough		- None -		
Yukon-Koyukuk Census Area				
Region 2	401	430	29.0	Lower Tanana
Fairbanks North Star Borough				
Region 1	430	524	94.0	Fairbanks North Star Borough
Region 7	524	588	64.0	Delta Salcha
Region 6	588	620	32.0	Upper Tanana
Southeast Fairbanks Census Area		- None -		
<sup>a</sup> Areas crossed also include all Aboveground Facilities and Associated Infrastructure that occurs within or near the pipelines' construction workspace areas at a given milepost. <sup>b</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP.				

In addition, APP has identified an offshore disposal site that is approximately 4 miles northeast of DH-2 (refer to Section 1.3.3.1 of Resource Report 1).

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### 8.4.2.2 Alaska Department of Natural Resources, Division of Forestry

#### Tanana Valley State Forest

At various locations along the Alaska Mainline, the APP will cross the TVSF (refer to Table 8.4.2-3). The approximately 1.8-million-acre TVSF was established in 1983 and is located almost entirely within the Tanana River Basin. Nearly 90 percent (1.6 million acres) of the forest consists of primarily hardwood and hardwood-white spruce forest that includes paper birch, quaking aspen, balsam poplar, black spruce, white spruce, and tamarack (ADNR Division of Forestry 2011). Timber production is the dominant commercial activity within the forest, although it is also open to mining, gravel extraction, oil and gas leasing, and grazing. Recreational opportunities within the TVSF include hunting, fishing, trapping, camping, hiking, dog sledding, cross country skiing, wildlife viewing, snowmachining, gold panning, boating, and berry-picking (ADNR Division of Forestry 2011).

TABLE 8.4.2-3					
Alaska Pipeline Project					
Tanana Valley State Forest Areas Crossed by or Within 0.25 Mile of the Project <sup>a</sup>					
Segment/Borough or Census Area	Begin Milepost <sup>b</sup>	End Milepost	Crossing Length (miles) <sup>c, d</sup>	Name	Ownership/Management
POINT THOMSON GAS TRANSMISSION PIPELINE				- None -	
ALASKA MAINLINE					
Yukon-Koyukuk Census Area	407.9	413.0	5.1	TVSF	ADNR- Division of Forestry
Fairbanks North Star Borough	463.7	465.6	1.9	TVSF	ADNR, Division of Forestry
	472.6	473.5	0.9	TVSF	ADNR, Division of Forestry
	510.5	518.2	7.7	TVSF	ADNR, Division of Forestry
Southeast Fairbanks Census Area	518.2	523.6	5.3	TVSF	ADNR, Division of Forestry
	575.5	576.6	1.1	TVSF	ADNR, Division of Forestry
	576.8	577.0	N/A	TVSF	ADNR, Division of Forestry
	579.9	580.0	N/A	TVSF	ADNR, Division of Forestry
	581.4	581.9	N/A	TVSF	ADNR, Division of Forestry
	586.2	586.5	N/A	TVSF	ADNR, Division of Forestry
	591.9	598.3	N/A	TVSF	ADNR, Division of Forestry
	623.3	624.4	N/A	TVSF	ADNR, Division of Forestry
	628.6	629.9	N/A	TVSF	ADNR, Division of Forestry
	617.4	618.8	1.4	TVSF	ADNR, Division of Forestry
<sup>a</sup> Areas crossed also include all Aboveground Facilities and Associated Infrastructure that occurs within or near the pipelines' construction workspace areas at a given milepost. <sup>b</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP. <sup>c</sup> When "N/A (not applicable)" is provided as a crossing length it is an indication that the land is not crossed by the pipeline but is located within 0.25 mile of the construction workspace. <sup>d</sup> The numbers in this table have been rounded for presentation purposes. As a result, the crossing lengths may not reflect the exact difference of end milepost from begin milepost in all cases.					
Source: ADNR 2006.					



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AS Article 04, Sections 41.17.200 through 400, state that ADNR must prepare a management plan for the forest that allows multiple uses of state forest land. In 2001, ADNR issued the TVSF Management Plan: 2001 Update, which sets forest-wide management goals and policies for fish and wildlife habitat, recreation, subsurface resources, materials, timber, and transportation uses. The plan also provides management policies for specific land-management concerns regarding cultural resources, tourism, forest protection, grazing, lakeshore management, private lands, public access, scientific resources, stream corridors, and trails (ADNR 2001a).


The Project will cross multiple management units with the TVSF, as listed in Tables 8.4.2-4 and 8.4.2-5.

TABLE 8.4.2-4				
Alaska Pipeline Project Tanana Valley State Forest Management Units Crossed by the Project				
Segment/Borough or Census Area	Begin Milepost	End Milepost	Crossing Length (miles)	Management Unit
POINT THOMSON GAS TRANSMISSION PIPELINE			- None -	
ALASKA MAINLINE				
North Slope Borough			- None -	
Yukon-Koyukuk Census Area			- None -	
Fairbanks North Star Borough	463.8	465.7	1.9	6
	472.6	473.5	.9	6
	510.6	518.3	7.7	7C
Southeast Fairbanks Census Area	518.3	523.8	5.5	8A
	575.6	576.6	1	10C
	617.4	618.8	1.4	OUT

TABLE 8.4.2-5				
Alaska Pipeline Project Aboveground Facilities and Associated Infrastructure Within the Tanana Valley State Forest				
Segment/Facility	Identification	Secondary Name (if applicable)	Milepost (or Nearest Approx.) <sup>a</sup>	Management Unit
POINT THOMSON GAS TRANSMISSION PIPELINE			- None -	
ALASKA MAINLINE				
Mainline Block Valves	MLBV-AK32	N/A	513.8	7C
Borrow Sites	Alternate Site 12 Extra		413.0	3A
	Alternate Site 50 Extra		512.8	7C
	Proposed Site 25 Extra		521.2	8A
	62-2-174-2		622.0	OUT

<sup>a</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP.

Management policies for each of the management units are presented in the TVSF Management Plan (2001). The management policy includes consideration of resource values or uses that are emphasized in different parts of the management unit; the resources present; and a description of how ADNR approaches proposed uses for specific areas and describes which resource uses the state intends to protect or foster.

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#### 8.4.2.3 Alaska Department of Transportation and Public Facilities

The APP will generally parallel the Dalton Highway at various locations between AMP 0.0 and AMP 404.0. As discussed further in Section 8.5, the State of Alaska has designated the Dalton Highway as a Scenic Byway (ADOTPF 2011a). In addition to this status, the highway is also managed by the ADOTPF under the Dalton Highway Master Plan.

The Dalton Highway was first built by the Alyeska Pipeline Service Company in 1974 to serve the construction of the Trans-Alaska Pipeline System (TAPS). The highway begins at its junction with the Elliott Highway and extends 414 miles north, and terminates at the Deadhorse Airport. In 1978, ADOTPF took over maintenance and operation of the highway from the Alyeska Pipeline Service Company. The road is now open to the public. Lands along the Dalton Highway are managed by BLM, State of Alaska, North Slope Borough, Stevens Village, private landowners (including private lands), and the Dalton Highway Coordination Group (Dalton Highway Advisory and Planning Board 1998).

In order to protect the historic, cultural, physical, and environmental resources along the highway, the Dalton Highway Master Plan was developed by the Dalton Highway Advisory and Planning Board (Dalton Highway Advisory and Planning Board 1998).

The Dalton Highway Master Plan provides guidance for addressing various issues identified by the Dalton Highway Advisory and Planning Board in developing the plan. These include corridor-wide development issues such as the availability of rescue/medical services, fish and wildlife protection, off-road access, and road conditions and travel impacts, as well as node<sup>11</sup>-specific issues such as identification and development. Implementation of the plan and the management recommendations is to be completed by the various land management agencies and interested parties mentioned above.

#### 8.4.2.4 Game Management Units

The State of Alaska is divided into 26 Alaska Department of Fish and Game (ADFG)-managed Game Management Units (GMUs) that dictate big game hunting seasons and regulations, bag limits per species, and any restricted hunting areas within each unit. Big game hunting opportunities include bison; black, brown, and grizzly bear; caribou; Dall sheep; deer; elk; moose; mountain goat; and muskox (ADFG 2011). Various small game and waterfowl hunting is also permitted. The APP will cross (in order from north to south) subsets of GMUs 26, 25, 24, 20, and 12 (refer to Table 8.4.2-6).

<sup>11</sup> As defined in the Dalton Highway Master Plan, a “node” is a distinct and compact cluster of development that has a minimal footprint on the land where public and private commercial facilities and development related to road traffic are allowed to locate.


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TABLE 8.4.2-6				
Alaska Pipeline Project Game Management Units Crossed by the Project <sup>a</sup>				
Segment/Borough or Census Area	Begin Milepost <sup>b</sup>	End Milepost	Crossing Length (miles)	Game Management Unit
POINT THOMSON GAS TRANSMISSION PIPELINE				
North Slope Borough	0.0	58.4	58.4	26B
ALASKA MAINLINE				
North Slope Borough	0.0	173.5	173.5	26B
	173.5	182.5	9.0	25A
	182.5	185.7	3.2	24A
Yukon-Koyukuk Census Area	185.7	316.1	130.4	24A
	316.1	324.6	8.5	25D
	324.6	397.5	72.9	20F
	397.5	430.2	32.7	20B
Fairbanks North Star Borough	430.2	518.4	88.2	20B
Southeast Fairbanks Census Area	518.4	519.7	1.3	20B
	519.7	619.5	99.8	20D
	619.5	745.1	125.6	12Z
<sup>a</sup> Areas crossed also include all Aboveground Facilities and Associated Infrastructure that occurs within or near the pipelines' construction workspace areas at a given milepost. <sup>b</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP. Source: ADFG, Division of Wildlife Conservation 2008.				


Where the pipeline follows the Dalton Highway for about the first 404 miles, the land is closed to hunting within 5 miles to each side of the highway, with the exception of federal subsistence hunters and archery hunting of big game, small game, and furbearing animals. Use of motorized vehicles, except aircraft, boats, and licensed highway vehicles, is prohibited to transport game or hunters within this corridor area. Fewer hunting restrictions apply to where the pipeline does not follow the Dalton Highway.

#### 8.4.2.5 Board of Regents of the University of Alaska and Alaska Mental Health Trust Authority

As listed in Table 8.4.2-1, APP will cross lands owned by the Board of Regents of the University of Alaska and the Alaska Mental Health Trust Authority.

Lands identified as Board of Regents of the University of Alaska are trust lands that are for the exclusive use and benefit of the University of Alaska and, therefore, are not state public domain lands (University of Alaska 2011). The University of Alaska develops, leases, and sells land and resources to generate revenue for its Land Grant Trust Fund, and in turn proceeds from the fund are used for scholarships and natural resources related education and research, amongst other things (University of Alaska 2011).

Similarly, lands identified as Alaska Mental Health Trust Authority are managed by the State of Alaska's Trust Land Office to generate income, which is used by the Alaska Mental Health Trust Authority to improve the lives and circumstance of trust beneficiaries (The Trust Land Office 2011).

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#### 8.4.2.6 Construction and Operation Impacts and Mitigation

APP is discussing the various land management plans, management objectives, project conformance, and mitigation measures with state land management agencies, as applicable for the Project.

Table 8.4.2-7 summarizes the temporary and permanent impacts on state lands affected by construction and operation of the Project.

TABLE 8.4.2-7						
Alaska Pipeline Project Land Use Impacts on State Lands Affected by the Project <sup>a</sup>						
Segment/Borough or Census Area	Begin Milepost <sup>b</sup>	End Milepost	Area	Impacts (acres) <sup>c, d</sup>		Existing Land Use(s)
				Const.	Oper.	
POINT THOMSON GAS TRANSMISSION PIPELINE						
North Slope Borough						
	0.0	58.4	State of Alaska, ADNDR	1,159.4	662.5	Open Land
PT Pipeline Subtotal				1,159.4	662.5	
ALASKA MAINLINE						
North Slope Borough	0.0	9.2	State of Alaska, ADNDR	95.5	54.5	Open Land
	9.2	39.5	State of Alaska, ADNDR	292.8	167.3	Open Land
	39.8	41.9	ADOTPF	17.5	10.0	Commercial/Industrial
	41.9	54.3	State of Alaska, ADNDR	110.6	63.2	Open Land
	54.3	55.3	ADOTPF	10.2	5.8	Commercial/Industrial
	55.3	56.4	State of Alaska, ADNDR	9.3	5.3	Open Land
	56.4	57.4	ADOTPF	8.9	5.1	Commercial/Industrial
	57.4	67.0	State of Alaska, ADNDR/State of Alaska T/A	112.7	64.4	Open Land
	67.0	67.1	ADOTPF	0.9	0.5	Commercial/Industrial
	67.1	122.0	State of Alaska, ADNDR/State of Alaska T/A	566.6	323.8	Open Land
	122.4	123.5	State of Alaska T/A	21.6	12.3	Open Land
	150.2	155.4	State of Alaska T/A	49.1	28.1	Open Land
	161.9	168.3	State of Alaska T/A	67.2	38.4	Open Land
	182.8	183.5	State of Alaska T/A	10.6	6.0	Open Land
Yukon-Koyukuk Census Area	221.5	222.6	State of Alaska T/A	10.8	6.2	Open Land
	235.5	246.4	State of Alaska, ADNDR/State of Alaska T/A	114.3	65.3	Open Land
	248.9	262.9	State of Alaska T/A	154.9	88.5	Open Land
	262.9	263.0	State of Alaska T/A	1.4	0.8	Commercial/Industrial
	263.0	275.6	State of Alaska T/A	174.3	99.6	Open Land
	275.6	275.8	ADOTPF	3.3	1.9	Commercial/Industrial
	275.8	279.9	State of Alaska T/A	50.2	28.7	Open Land
	281.1	283.1	ADOTPF	24.3	13.9	Commercial/Industrial
	285.4	308.5	State of Alaska T/A	241.9	138.3	Open Land
	311.8	337.0	State of Alaska T/A	330.6	188.9	Open Land
	338.0	339.1	State of Alaska T/A	11.8	6.8	Open Land
	340.2	357.6	State of Alaska T/A	269.8	154.3	Open Land
	360.2	360.5	State of Alaska, ADNDR	2.8	1.6	Water

TABLE 8.4.2-7

**Alaska Pipeline Project  
Land Use Impacts on State Lands Affected by the Project <sup>a</sup>**

Segment/Borough or Census Area	Begin Milepost <sup>b</sup>	End Milepost	Area	Impacts (acres) <sup>c, d</sup>		Existing Land Use(s)
				Const.	Oper.	
Fairbanks North Star Borough	360.5	408.5	State of Alaska, ADNR/State of Alaska T/A	787.4	450.0	Open Land
	408.5	408.9	State of Alaska, ADNR	7.2	4.1	Commercial/Industrial
	408.9	439.9	State of Alaska, ADNR	452.5	258.6	Open Land
	444.4	445.6	State of Alaska, ADNR	19.9	11.3	Open Land
	446.2	446.2	State of Alaska, ADNR	1.2	0.7	Open Land
	447.7	448.3	State of Alaska, ADNR	10.4	6.0	Open Land
	449.1	451.8	State of Alaska, ADNR/State of Alaska T/A	5.2	2.9	Open Land
	451.9	452.9	Board of Regents of the University of Alaska	6.8	3.9	Forest
	452.9	453.2	State of Alaska, ADNR	11.9	6.8	Open Land
	453.6	454.1	Alaska Mental Health Trust Authority	10.6	6.1	Forest
	454.1	454.8	State of Alaska, ADNR	11.6	6.6	Open Land
	455.4	456.5	Alaska Mental Health Trust Authority	12.5	7.2	Forest
	456.5	456.8	Board of Regents of the University of Alaska	6.2	3.5	Forest
	457.8	457.9	Alaska Mental Health Trust Authority	1.4	0.8	Forest
	457.9	459.0	State of Alaska, ADNR	16.4	9.4	Open Land
	460.2	460.5	Alaska Mental Health Trust Authority	6.9	4.0	Forest
	463.5	473.5	State of Alaska, ADNR	110.2	62.9	Open Land
	473.5	476.7	Alaska Mental Health Trust Authority	11.4	6.5	Forest
	490.5	494.6	State of Alaska, ADNR	57.7	33.0	Open Land
	495.5	495.5	ADOTPF	1.2	0.7	Commercial/Industrial
	495.6	496.4	State of Alaska T/A	11.8	6.8	Open Land
Southeast Fairbanks Census Area	496.6	523.6	State of Alaska, ADNR/State of Alaska T/A	465.9	266.3	Open Land
	523.7	537.4	State of Alaska, ADNR	218.5	124.9	Open Land
	537.4	537.9	Alaska Mental Health Trust Authority	11.3	6.5	Forest
	537.9	538.2	State of Alaska, ADNR	3.1	1.8	Open Land
	539.8	540.5	State of Alaska, ADNR	6.6	3.8	Open Land
	540.6	540.7	State of Alaska, ADNR	4.3	2.5	Open Land
	541.1	541.2	State of Alaska, ADNR	1.5	0.9	Open Land
	541.6	542.2	State of Alaska, ADNR	0.0	3.8	Agricultural
	542.2	543.9	State of Alaska, ADNR	14.6	8.3	Open Land
	544.4	546.3	Board of Regents of the University of Alaska	23.5	13.4	Forest
	546.3	546.6	State of Alaska, ADNR	2.7	1.5	Agricultural
	546.6	547.5	Board of Regents of the University of Alaska	12.1	6.9	Forest
	549.0	549.1	Alaska Mental Health Trust Authority	2.1	1.2	Forest
	549.4	549.4	State of Alaska, ADNR	0.2	0.1	Commercial/Industrial
	551.4	551.9	State of Alaska, ADNR	10.2	5.8	Agricultural


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TABLE 8.4.2-7						
Alaska Pipeline Project Land Use Impacts on State Lands Affected by the Project <sup>a</sup>						
Segment/Borough or Census Area	Begin Milepost <sup>b</sup>	End Milepost	Area	Impacts (acres) <sup>c, d</sup>		Existing Land Use(s)
				Const.	Oper.	
	555.2	555.5	State of Alaska, ADNR	4.7	2.7	Open Land
	560.3	561.0	Board of Regents of the University of Alaska	13.6	7.8	Agricultural
	563.8	564.8	State of Alaska T/A	12.1	7.6	Open Land
	565.1	565.7	State of Alaska T/A	11.2	6.5	Open Land
	565.7	566.3	State of Alaska T/A	10.3	5.9	Agricultural
	566.3	567.6	State of Alaska, ADNR	24.9	14.3	Open Land
	567.6	569.5	State of Alaska, ADNR	35.6	20.3	Commercial/Industrial
	569.5	569.8	State of Alaska, ADNR	5.5	3.2	Open Land
	569.8	572.1	State of Alaska, ADNR	39.7	24.9	Commercial/Industrial
	572.1	573.2	State of Alaska, ADNR	19.4	12.5	Open Land
	573.2	573.6	State of Alaska, ADNR	7.2	4.2	Agricultural
	573.6	577.7	State of Alaska, ADNR	69.7	41.1	Open Land
	577.7	577.7	State of Alaska, ADNR	0.6	0.3	Agricultural
	577.7	578.2	State of Alaska, ADNR	10.3	5.6	Open Land
	578.9	579.4	State of Alaska, ADNR	11.7	6.3	Open Land
	580.0	588.4	State of Alaska, ADNR/State of Alaska T/A	125.8	71.6	Open Land
	588.4	588.8	ADOTPF	3.3	1.9	Commercial/Industrial
	588.8	589.3	State of Alaska, ADNR	9.0	5.1	Agricultural
	589.3	604.6	State of Alaska T/A	316.7	181.0	Open Land
	610.4	610.4	State of Alaska, ADNR	0.9	0.5	Open Land
	617.5	629.5	State of Alaska, ADNR	135.8	77.6	Open Land
	645.8	646.0	State of Alaska, ADNR	6.9	4.0	Open Land
	646.2	655.4	State of Alaska, ADNR	190.9	109.1	Open Land
	660.8	661.5	State of Alaska, ADNR	15.1	8.6	Open Land
	683.6	683.9	State of Alaska T/A	2.8	1.5	Open Land
	716.2	718.8	State of Alaska, ADNR/State of Alaska T/A	40.6	23.4	Open Land
	718.9	735.1	State of Alaska, ADNR/State of Alaska T/A	255.7	146.1	Open Land
	435.5	737.3	State of Alaska T/A	31.3	17.9	Open Land
	737.4	741.2	State of Alaska, ADNR/State of Alaska T/A	56.6	32.4	Open Land
	741.5	742.2	State of Alaska T/A	8.2	4.7	Open Land
Alaska Mainline Subtotal				6,577.1	3,767.7	
PROJECT TOTAL				7,736.5 <sub>e, f</sub>	4,430.2 <sub>e, f</sub>	

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TABLE 8.4.2-7						
Alaska Pipeline Project Land Use Impacts on State Lands Affected by the Project <sup>a</sup>						
Segment/Borough or Census Area	Begin Milepost <sup>b</sup>	End Milepost	Area	Impacts (acres) <sup>c, d</sup>		Existing Land Use(s)
				Const.	Oper.	
<sup>a</sup> Areas affected also include all Aboveground Facilities and Associated Infrastructure that occurs within or near the pipelines' construction workspace areas at a given milepost. Refer to Tables 8.2.4-1 through 8.2.4-4 and Appendices 8B and 8C for state land ownership and land use impacts associated with Aboveground Facilities and Associated Infrastructure.						
<sup>b</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP.						
<sup>c</sup> Pipeline right-of-way construction impacts are based on a 175-foot-wide temporary right-of-way. Operational impacts are based on a 100-foot-wide permanent right-of-way.						
<sup>d</sup> The numbers in this table have been rounded for presentation purposes. As a result, the totals may not reflect the exact sum of the addends in all cases.						
<sup>e</sup> The GTP is located on land owned and managed by the State of Alaska and will affect 235.0 acres of commercial/industrial land (refer to Section 8.2).						
<sup>f</sup> In addition to the state management agencies listed in the table, the dredged material placement area associated with the GTP may be located at least partially within the state waters and will affect a total of 285.0 acres of open water.						

The APP will cross state lands using the typical and, where appropriate, special pipeline construction procedures described in Sections 1.6.2 and 1.6.3, respectively, of Resource Report 1. Impacts and mitigation for specific resources such as wetlands and waterbodies located on state lands are discussed in Resource Report 2. APP will follow its Project-specific Plan and Procedures to mitigate impacts of the Project on state lands. Additionally, APP is working with the various state agencies to achieve conformance with the applicable standards and guidelines in the Tanana Basin Area Plan, TVSF Management Plan, and Dalton Highway Master Plan.


Within GMUs, temporary disruptions to hunting with firearms are not expected to occur in the immediate vicinity of the APP between approximately AMP 0.0 and AMP 360.1. From the Yukon River north, hunting with firearms is prohibited within 5 miles on either side of the Dalton Highway, except by federal subsistence hunters. Bow hunting for big game, small game, and furbearing animals is permitted within the Dalton Highway Corridor Management Area. Temporary disruptions to federal subsistence hunters and archery hunting may occur in the immediate vicinity of the APP parallel to the Dalton Highway due to construction activities and noise. These disruptions may also occur in other areas affected by the Project (e.g., PT Pipeline, areas outside of Dalton Highway corridor). For those spreads built during the summer months, the end of the construction season may conflict with some hunting areas. APP will work with the respective land manager and subsistence users of those locations to ensure hunters have access across the right-of-way where necessary to access areas for hunting. APP will not allow firearms in work camps except for use by designated security personnel. Refer to the subsistence report for more information.

### Municipal Lands

The PT Pipeline will not affect any municipally owned lands. Less than 2 percent of the Alaska Mainline will cross municipally owned land located in the Fairbanks North Star Borough (refer to Table 8.4-1).

### Private Lands

The PT Pipeline will not affect any privately owned lands and approximately 15 percent of the Alaska Mainline will cross privately owned land (refer to Table 8.4-1). Private lands in Alaska

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include Native Regional and Village Corporation lands, as well as other private interests in the state. The Alaska Native Claims Settlement Act (ANCSA) of 1971 mandated the creation of Regional and Village Native corporations for the disbursement of the 44 million acres and payment of \$1 billion mandated to Native ownership (ADNR 2000). Under ANCSA, Section 12(a) and 12(b), these corporations are entitled to select surface and subsurface lands from the federal government. Thirteen regional corporations were created for the distribution of ANCSA land and money and 224 village corporations, of 25 or more residents, shared 26 million acres. The remaining acres, which include historical sites and existing Native-owned lands, went into a land pool to provide land to smaller villages of less than 25 people.

The ASRC is a Native Regional Corporation, largely located within the North Slope area, through which the PT Pipeline, GTP, and the Alaska Mainline pass. Doyon Limited is a Native Regional Corporation that covers much of Interior Alaska and through which the Alaska Mainline pipeline south of the Brooks Range passes. Village corporations near the pipeline route include Nuiqsut, Anaktuvuk Pass, Evansville, Stevens Village, Dot Lake, Tanacross, Tetlin, and Northway (refer to Resource Report 5).

#### **8.4.3 COASTAL ZONE MANAGEMENT**

In 2011, the State of Alaska's authority to implement its coastal zone management program expired. Thus, the Coastal Zone Management Act is not applicable to this Project at this time.

### **8.5 RECREATION AND SPECIAL INTEREST AREAS**


Generally, recreation and special land uses include federal, state, or local parks and forests; conservation lands; wildlife habitat management areas; hunter management areas; natural landmarks; scenic byways; designated trails; recreational rivers; and public facilities such as campgrounds and golf courses. Federally and state-managed/owned special management areas were described in Section 8.4 and are discussed further in this section relative to recreational activities or features within these managed lands. Historic or culturally significant areas potentially affected by the Project will be discussed in Resource Report 4. Habitat for unique, sensitive, or significant wildlife is discussed in Resource Report 3. Major waterbodies and/or waterbodies considered sensitive are discussed in Resource Report 2.

The APP will cross and/or be within 0.25 mile of various recreational and special interest areas, as discussed below. The Project will not cross any National Forests, National or State Wild and Scenic Rivers, or other federal conservation system units (e.g., wilderness areas). The Project will also not cross or come within 0.25 mile of any city or borough park. Recreation and special interest areas were identified by reviewing U.S. Geological Survey topographic maps, public geographic information system (GIS) databases, and federal and state land use and publically available online resources.

#### **8.5.1 STATE PARKS, RECREATION SITES, AND SPECIAL USE AREAS**

The Project will not cross any recreation areas or state parks. However, the Project will be within 0.25 mile of three recreational areas or parks, as follows:

- Quartz Lake State Recreation Area at approximate AMP 537.0;
- Big Delta State Historical Park at approximately AMP 538.0; and
- Tok River State Recreation Site at approximately AMP 660.0.

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The Project will not cross or be located within 0.25 miles of any ADNR designated special use areas (ADNR DMLW 2011b).

### 8.5.2 SCENIC BYWAYS

The APP will not cross any federally designated National Scenic Byways (U.S. Department of Transportation, Federal Highway Administration [FHA] 2011a). However, the State of Alaska has designated the Dalton Highway, Steese Highway, and the Richardson Highway (North Segment) as Scenic Byways (ADOTPF 2011a).

The Alaska Mainline will cross and be located within 0.25 mile of the Dalton Highway at various locations (refer to Table 1.6.3-3 and Appendix 1C of Resource Report 1). The Alaska Mainline will cross and be located with 0.25 mile of the Steese Highway at various locations (refer to Table 1.6.3-3 in Resource Report 1 and Appendix 1C of Resource Report 1). The Alaska Mainline will not cross but may be located within 0.25 mile of the Richardson Highway at various locations.

### 8.5.3 REVISED STATUTE 2477 RIGHTS-OF-WAY

Revised Statute (RS) 2477 of the Mining Law of 1866 granted states and territories unrestricted rights-of-way over federal lands that had no existing reservations or private entries. RS 2477 rights-of-way could be established in Alaska between 1884 (the Organic Act) and 1968 (Public Land Order 4582), and included rural mail routes, mining trails, and other transportation routes through construction and/or use (ADNR 2001b). Historically, an RS 2477 right-of-way in Alaska occurred if a “public highway” was established by use or mechanical construction across public lands and acceptance of a self-executing grant occurred.

While the law to establish RS 2477 rights-of-way in the United States was repealed by Congress in 1976, rights-of-way that existed at that date expressly remained a valid existing right (ADNR DMLW 2011c). If a potential RS 2477 right-of-way was found to be constructed and accepted while the underlying property was unreserved federally owned land, the right-of-way generally was granted to the State of Alaska by the federal government. As a result, ADNR has documented hundreds of historic routes that qualify as RS 2477 rights-of-way.

Based on review of ADNR’s Land Records Information Section (ADNR 2001c), both the PT Pipeline and Alaska Mainline will cross several designated RS 2477 rights-of-way as listed in Table 8.5.4-1.

TABLE 8.5.4-1				
Alaska Pipeline Project Revised Statute 2477 Rights-of-Way Crossed by and Within 0.25 Mile of the Project				
Segment/Borough or Census Area	Milepost <sup>a</sup>	Crossing Length (feet) <sup>b</sup>	Name	Ownership/Jurisdiction
POINT THOMSON GAS TRANSMISSION PIPELINE				
North Slope Borough	2.1	100	RST 1043 Bullen-Staines River	State of Alaska
	2.4	Within 0.25 mile	RST 1043 Bullen-Staines River	State of Alaska
	6.9	100	RST 1043 Bullen-Staines River	State of Alaska
ALASKA MAINLINE				
North Slope Borough	64.2	100	Hickel Highway	Bureau of Land Management (BLM)


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TABLE 8.5.4-1				
Alaska Pipeline Project				
Revised Statute 2477 Rights-of-Way Crossed by and Within 0.25 Mile of the Project				
Segment/Borough or Census Area	Milepost <sup>a</sup>	Crossing Length (feet) <sup>b</sup>	Name	Ownership/Jurisdiction
Yukon-Koyukuk Census Area	221.6	100	Wiseman-Chandalar	BLM
	244.2	100	Coldfoot-Chandalar Lake Trail	BLM
	244.2	100	Caro-Coldfoot	BLM
	244.2	100	Coldfoot-Junction Trail 49 (east route)	BLM
	244.2	100	Slate Creek	BLM
	251.6	Within 0.25 mile	Bettles-Coldfoot	State of Alaska
	253.0	Within 0.25 mile	Bergman-Cathedral Mountain	BLM
	258.8	100	Slate Creek	BLM
	304.6	100	Hickel Highway	BLM
	404.2	100	Hunter Creek-Livengood	State of Alaska
Fairbanks North Star Borough	405.3	100	Dunbar-Brooks Terminal	State of Alaska
	448.7	100	Vault Creek-Treasure Creek	State of Alaska
	452.0	Within 0.25 mile	Eldorado Creek Trail	State of Alaska
	457.5	100	Gilmore Trail-Fairbanks Creek Connector Trail	State of Alaska
	459.0	Unknown	Gilmore Hill Road	State of Alaska
	459.6	Unknown	Smallwood Creek - Nugget Creek	State of Alaska
	461.1	100	Gilmore Trail Branch-Smallwood Creek	State of Alaska
	461.1	100	Gilmore Trail Branch-Smallwood Creek	State of Alaska
	461.4	100	Gilmore Trail Branch-Smallwood Creek	State of Alaska
	461.6	100	Gilmore Trail Branch-Smallwood Creek	State of Alaska
	462.1	100	Gilmore Trail Branch-Smallwood Creek	State of Alaska
	462.3	100	Gilmore Trail Branch-Smallwood Creek	State of Alaska
	463.3	Unknown	Smallwood Creek - Nugget Creek	State of Alaska
	470.7	Unknown	Fairbanks - Chena Hot Springs	State of Alaska
	471.7	100	Chena Lakes Trail	State of Alaska
	474.3	100	Chena Lakes Trail	State of Alaska
	503.5	100	Salcha-Caribou Sled Road	State of Alaska
Southeast Fairbanks Census Area	518.2	Unknown	Richardson Highway (Birch Lake) - Caribou Creek Trail	State of Alaska
	531.9	100	Goodpaster River Trail	State of Alaska
	537.7	100	North Fork of Fortymile-Big Delta	State of Alaska
	539.3	100	Tanana Crossing-Grundler Trail	State of Alaska
	580.7	100	Little Gerstle River-Sheep Creek	State of Alaska
	589.0	100	Hajdukovich-Macomb Plateau Trail	State of Alaska
	589.0	100	Hajdukovich-Horn Mountain Trail	State of Alaska

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TABLE 8.5.4-1 Alaska Pipeline Project Revised Statute 2477 Rights-of-Way Crossed by and Within 0.25 Mile of the Project				
Segment/Borough or Census Area	Milepost <sup>a</sup>	Crossing Length (feet) <sup>b</sup>	Name	Ownership/Jurisdiction
	644.4	100	Slana-Tanana Crossing	State of Alaska
	656.4	100	Tok River Road	State of Alaska
	660.5	Unknown	Tok Dog Mushers Trail	State of Alaska
	660.9	Within 0.25 mile	Tok Dog Mushers Trail	State of Alaska
	678.4	Within 0.25 mile	Tetlin-Alaska Highway Trail	State of Alaska
	679.1	Unknown	Dennison Fork Trail	State of Alaska
	679.9	Unknown	Ladue River Trail	State of Alaska
	715.3	100	Gardiner Creek Trail	State of Alaska
	728.7	100	Paradise Hill-Cabin	State of Alaska
	735.7	100	Scotty Creek Lodge-High Cache	State of Alaska
	738.6	100	Scotty Creek Lodge-High Cache	State of Alaska

<sup>a</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP.

<sup>b</sup> Assuming a 125-foot-wide construction width, each crossing will result in temporary impacts on approximately 0.3 acre of trail land.

Source: ADNR 2001c.


According to ADNR (ADNR DMLW 2011c), the following conditions apply to RS 2477 rights-of-way.

- An RS 2477 right-of-way is treated similar to an easement over the land; while the public may use the right-of-way within the scope of the grant (i.e., use prior to 1976), the public has no right to exceed that use.
- An underlying landowner may use the land but only in such a way that does not interfere with the originally established scope.
- Additionally, federal land managers may “reasonably regulate” the right-of-way consistent with federal regulations within their jurisdiction.
- If land outside of the right-of-way is used or the right-of-way is used beyond its scope, the action could constitute trespass on private land or violate local, state, or federal regulations on public land.
- An RS 2477 right-of-way may be maintained “to the extent reasonably necessary to ensure safe use consistent with its historical uses.”

#### 8.5.4 TRAILS

##### Federal and State Designated Trails

The U.S. National Trail System is comprised of federally designated National Recreation Trails, National Scenic Trails, and National Historic Trails. The Project will not cross any designated National Recreation Trails, National Scenic Trails, or National Historic Trails (National Park Service 2008).

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The Project will not cross or be located within 0.25 miles of any state trails (ADNR Division of Parks and Outdoor Recreation 2011d).

### Recreational Trails

Table 8.5.5-1 lists the known trails crossed by the APP that are being used for general recreational purposes.

TABLE 8.5.5-1 Alaska Pipeline Project Recreational Trails Crossed by the Project			
Segment/Borough or Census Area	Begin Milepost <sup>a, b</sup>	Name	Ownership/Jurisdiction
POINT THOMSON GAS TRANSMISSION PIPELINE			
North Slope Borough	2.2	Tractor Trail	State of Alaska
	4.8	Unnamed Trail	State of Alaska
	6.9	Tractor Trail	State of Alaska
	32.8	Winter Trail	State of Alaska
ALASKA MAINLINE			
North Slope Borough	48.0	Winter Trail	State of Alaska
	64.0	Winter Trail	State of Alaska
	69.0	Winter Trail	State of Alaska
	138.3	Unnamed road/trail	State of Alaska
	139.2	Unnamed road/trail	State of Alaska
Yukon-Koyukuk Census Area	221.5	Winter Trail	BLM
	222.0	Winter Trail	BLM
	315.0	Winter Trail	BLM
Fairbanks North Star Borough	431.3	Ski Loop Trail (designated)	State of Alaska
	431.3	Summit Trail (designated)	State of Alaska
	470.5	Winter Trail	BLM
Southeast Fairbanks Census Area	555.5	Winter Trail	State of Alaska
	644.1	Eagle Trail	Private
<sup>a</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP. <sup>b</sup> Trail crossing lengths and impacts are not calculated due to their transient nature and because they are not regularly maintained to a certain measurable width by a particular agency or party.			

### 8.5.5 RECREATION, SCENIC AND SPECIAL INTEREST AREAS

Table 8.5.6-1 lists the recreation, scenic, and special interest areas crossed by the APP. These generally consist of areas that are not designated or maintained by any particular agency but may have recreational value.



TABLE 8.5.6-1

**Alaska Pipeline Project  
Recreation, Scenic, and Special Interest Areas Crossed by the Project**

Segment/Borough or Census Area	Begin Milepost <sup>a, b</sup>	End Milepost	Name <sup>c</sup>	Ownership/Jurisdiction
<b>POINT THOMSON GAS TRANSMISSION PIPELINE</b>				
North Slope Borough	23.7	24.4	Shaviovik River	State of Alaska
	35.0	--	Kadleroshilik River	State of Alaska
	41.6	42.2	Sagavanirktok River	State of Alaska
	48.8	50.1	Sagavanirktok River	State of Alaska
	56.3	57.3	Putuligayak River	State of Alaska
<b>ALASKA MAINLINE</b>				
North Slope Borough	4.2	--	Putuligayuk River	State of Alaska
	23.5	--	Sagavanirktok River	State of Alaska
	129.1	--	Toolik River	BLM
	130.0	--	Kuparuk River	BLM
	131.8	--	Kuparuk River	BLM
	148.0	--	Atigun River	BLM
	160.2	--	Atigun Tributary	BLM
	190.3	--	Nutirwik Creek	BLM
Yukon-Koyukuk Census Area	204.7	--	Snowden Creek	BLM
	211.5	--	Middle Fork Koyukuk River	BLM
	211.5	--	Bettles River	BLM
	214.3	--	Middle Fork Koyukuk River	BLM
	222.1	--	Gold Creek	BLM
	222.8	--	Sheep Creek	BLM
	223.2	--	Wolf Creek	BLM
	223.8	--	Nugget Creek	Private
	225.0	--	Over Creek	BLM
	226.2	--	Rainbow Gulch	BLM
	227.5	--	Coon Gulch	BLM
	228.4	--	Koyukuk Rover	BLM
	231.0	--	Koyukuk Rover	BLM
	232.0	--	Minnie Creek	BLM
	239.5	--	Marion Creek	State of Alaska
	242.5	--	Clara Creek	State of Alaska
	244.3	--	Slate Creek	State of Alaska
	249.0	--	Rosie Creek	BLM
	257.5	--	Chapman Creek	BLM
	264.0	--	South Fork Koyukuk River	BLM
	269.5	--	Grayling Creek	BLM
	276.0	--	Jim River	BLM
	278.0	--	Douglas Creek	BLM
	284.5	--	Prospect Creek	BLM
	291.5	--	North Fork Bonanza Creek	BLM
	293.2	--	South Fork Bonanza Creek	BLM
	301.8	--	Fish Creek	BLM

TABLE 8.5.6-1

**Alaska Pipeline Project  
Recreation, Scenic, and Special Interest Areas Crossed by the Project**

Segment/Borough or Census Area	Begin Milepost <sup>a, b</sup>	End Milepost	Name <sup>c</sup>	Ownership/Jurisdiction
Fairbanks North Star Borough	310.0	--	Kanuti River	BLM
	360.0	--	Yukon River	BLM
	370.3	--	Isom Creek	State of Alaska
	385.5	--	Hess Creek	State of Alaska
	391.0	--	Erickson Creek	State of Alaska
	399.0	--	Lost Creek	State of Alaska
	405.4	--	Tolovana River	State of Alaska
	407.3	--	Shorty Creek (designated)	State of Alaska
	412.6	--	Wilber Creek (designated)	State of Alaska
	415.2	--	Slate Creek (designated)	State of Alaska
	419.4	--	Tatalina River	State of Alaska
	420.0	--	Recreation Cabins (designated)	State of Alaska
	424.5	--	Globe Creek	State of Alaska
	430.6	--	Aggie Creek (designated)	State of Alaska
	438.5	--	Washington Creek	State of Alaska
	445.0	--	Chatanika River (designated)	State of Alaska
	446.9	--	Treasure Creek	Fairbanks North Star
	453.0	--	Fox Creek	State of Alaska
	457.0	--	Steel Creek	NOAA
	463.4	--	Small Wood Creek	Private
	466.0	--	Iowa Creek	State of Alaska
	472.2	--	Potlatch Creek	BLM
	475.0	--	Chena River (designated)	BLM
	475.4	--	Chena River (designated)	BLM
	475.9	--	Chena River (designated)	Fairbanks North Star
	481.5	--	Moose Creek (designated)	Military/BLM
	484.2	--	French Creek (designated)	Military
	485.2	--	French Creek (designated)	Military
	489.5	--	French Creek (designated)	Military
	497.0	--	Little Salcha	State of Alaska
	502.0	--	Salcha Creek	State of Alaska
	506.1	--	Redmont Creek	State of Alaska
	513.0	--	Gold Run Creek (designated)	State of Alaska
	516.0	--	Minton Creek (designated)	State of Alaska
	518.9	--	Rosa Creek (designated)	State of Alaska
Southeast Fairbanks Census Area	525.0	--	Keystone Creek (designated)	State of Alaska
	526.0	--	Shaw Creek	State of Alaska
	538.0	--	Tanana River (designated)	State of Alaska
	561.2	--	Rhoads Creek	Private
	565.0	--	Sawmill Creek	Private
	565.0	--	Barley Way	Private
	576.0	--	Gerstel River	State of Alaska
	580.6	--	Little Gerstel	State of Alaska


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TABLE 8.5.6-1				
Alaska Pipeline Project Recreation, Scenic, and Special Interest Areas Crossed by the Project				
Segment/Borough or Census Area	Begin Milepost <sup>a, b</sup>	End Milepost	Name <sup>c</sup>	Ownership/Jurisdiction
	588.3	--	Johnson River	State of Alaska
	594.4	--	Sears Creek	BLM
	597.5	--	Berry Creek	BLM
	610.2	--	Chief Creek	Private
	611.8	--	Bear Creek	Private
	621.2	--	Robertson River	State of Alaska
	626.6	--	Sheep Creek	State of Alaska
	630.1	--	Cathedral Rapids Cr. No. 2	Private
	630.9	--	Cathedral Rapids Cr. No. 1	Private
	634.9	--	Yerick Creek	Private
	660.0	--	Tok River (designated)	Private
	668.0	--	Tanana River	Private
	688.6	--	Bitters Creek	Private
	700.0	--	Beaver Creek	Private
	708.2	--	Silver Creek	Private
	713.8	--	Ten Mile Creek	Private
	719.5	--	Gardina Creek	State of Alaska
	732.1	--	Sweetwater Creek	State of Alaska
	739.8	--	Desper Creek	State of Alaska
	741.3	--	Scottie Creek	Private
<sup>a</sup> PT Pipeline milepost 0.0 starts at the PTU; Alaska Mainline milepost 0.0 starts at the GTP. <sup>b</sup> Recreation, Scenic, and Special Interest Area crossing lengths and impacts are not calculated due to their transient nature and because they are not regularly maintained to a certain measurable width or area by a particular agency or party. <sup>c</sup> Waterbody name does not correspond with specific APP crossing of feature in all cases but is intended to reflect a recreational area near a named waterbody. Includes waterbody and adjacent special/general use land used for camping, fishing, etc.				

## 8.5.6 CONSTRUCTION AND OPERATION IMPACTS AND MITIGATION


### 8.5.6.1 State Parks, Recreation Sites, and Special Use Areas

Because the APP will not cross any state parks, recreation sites, or special use areas, construction and operation impacts and mitigation for these areas are not applicable. Indirect effects such as noise and visual impacts will be temporary and limited to the period of construction.

### 8.5.6.2 Scenic Byways

Construction and operation may impact the state designated scenic byways, Dalton, Steese, and Richardson Highways. Construction across these areas will occur during both winter and summer months (refer to Table 1.5-1 in Resource Report 1 for APP's construction schedule).

As discussed in Section 1.6.3.3 of Resource Report 1, most major paved roads and highways and critical unpaved roads will be crossed by conventional horizontal boring or open-cut techniques. Construction across paved roads, highways, and unpaved roads will be performed in accordance with the requirements of road crossing permits and approvals from the

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appropriate jurisdictions. Following construction, roads will be reclaimed as specified by applicable crossing permits.

Refer to Appendix 1F of Resource Report 1 for typical drawings depicting different techniques for road and highway crossing construction. Section 8.8 discusses potential impacts from construction and operation of the pipeline on the scenic quality of these highways.

#### **8.5.6.3 Revised Statute 2477 Rights-of-Way**

Construction across the RS 2477 trails will affect approximately 0.3 acre of various land use types at each crossing location (refer to Appendix 8A for land uses by MP). Construction across these areas will occur in both summer and winter months (refer to Table 1.5-1 in Resource Report 1 for APP's construction schedule). The APP will cross RS 2477 trails using the typical and special pipeline construction procedures described in Sections 1.6.2 and 1.6.3, respectively, of Resource Report 1. Construction across RS 2477 trails will be performed in accordance with the requirements of the land management agency or reasonable landowner requests. Following construction, RS 2477 trails will be reclaimed such that they function consistently with pre-construction use, except where otherwise authorized.


#### **8.5.6.4 Trails**

Because the APP will not cross or affect any federally or state-designated trails, construction and operation impacts and mitigation for federally or state-designated trails are not applicable. However, construction and operation may impact non-designated, general recreational use trails, identified in Table 8.5.5-1.

APP will cross trails using the typical pipeline construction procedures described in Section 1.6.2 of Resource Report 1. Impacts and mitigation for specific resources such as wetlands and waterbodies are discussed in Resource Report 2. Construction across these areas will occur in both summer and winter months (refer to Table 1.5-1 in Resource Report 1 for APP's construction schedule). Construction across trails will be performed in accordance with the requirements of the land management agency or reasonable landowner requests. Following construction, trails will be reclaimed such that they function consistently with pre-construction use, except where otherwise authorized.

#### **8.5.6.5 Recreation, Scenic and Special Interest Areas**

Construction and operation may impact the recreation, scenic and special interest areas identified in Table 8.5.6-1. The APP will cross general recreational use areas using the typical and special pipeline construction procedures described in Sections 1.6.2 and 1.6.3, respectively, of Resource Report 1. Impacts and mitigation for specific resources such as wetlands and waterbodies are discussed in Resource Report 2. Construction across these areas will occur in both summer and winter months (refer to Table 1.5-1 in Resource Report 1 for APP's construction schedule). Construction across waterbodies and general recreation areas will also be performed in accordance with the requirements of the land management agency or reasonable landowner requests. Following construction, recreation, scenic and special interest areas will be reclaimed such that they function consistently with pre-construction use, except where otherwise authorized.

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## 8.6 LOCAL LAND USE PLANS

The following discusses local land use plans and management policies as they relate to the APP.

### 8.6.1 NORTH SLOPE BOROUGH

- The PT Pipeline, GTP, and Alaska Mainline between AMP 0.0 and AMP 185.2, including Aboveground Facilities and Associated Infrastructure, are located within the boundaries of the North Slope Borough. While APP will not cross land owned by the North Slope Borough within this area, the goals and objectives of the North Slope Borough's Comprehensive Plan are to be considered. The Comprehensive Plan also lists parties responsible for implementing and/or ensuring that the management objectives are carried through (URS Corporation 2005).
- Uses and activities within the APP area may also be subject to the provisions of the North Slope Borough Title 19 Land Management Regulations (LMRs). The LMRs establish zoning districts and performance-based land management policies. An overall intent of the Borough Comprehensive Plan and LMRs is to maintain and protect subsistence resources.
- A portion of the PT Pipeline right-of-way, the GTP site, and Alaska Mainline right-of-way within the North Slope Borough boundary is zoned for resource development and subject to an existing Master Development Plan. One portion of the PT Pipeline right-of-way between Point Thomson and the Badami Development Unit has not been unitized and is zoned as a Conservation District. Construction of a pipeline from Point Thomson will require rezoning to resource development use and preparation of a Master Development Plan for the area.


### 8.6.2 FAIRBANKS NORTH STAR BOROUGH

The Alaska Mainline between AMP 430.2 and AMP 518.2, including associated Aboveground Facilities and infrastructure, are located within the boundaries of the Fairbanks North Star Borough. In addition to being within this designated borough, the APP will cross land owned by the Fairbanks North Star Borough (refer to Appendix 8A). The Fairbanks North Star Borough Regional Comprehensive Plan provides a framework for citizens and officials to make decisions related to land use, and to form the basis for ordinances and programs to guide land development, and use (Fairbanks North Star Borough Community Planning Department 2005).

The plan provides goals and strategies related to managing land use, economic development, transportation and infrastructure, the environment, and community and human resources. Related to land use, the plan also establishes area designations, land categories, and public improvement availabilities.

### 8.6.3 CONSTRUCTION AND OPERATION IMPACTS AND MITIGATION

APP will work with the various boroughs and planning departments to obtain the required permits.

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## 8.7 HAZARDOUS WASTE SITES, CONTAMINATION, AND LANDFILLS

APP conducted a desktop review of the available information concerning known or potential hazardous waste sites and contamination within the Project area. This review included a search of the following:

- Alaska Department of Environmental Conservation (ADEC) Contaminated Sites Database (CSD)
- ADEC Leaking Underground Storage Tank (LUST) Database
- EPA National Priority List (NPL)
- Native American Management System for Environmental Impacts
- ADNR Land Records Database
- ADNR Records Document Database
- COE Records
- Resource Conservation and Recovery Act (RCRA) Database
- Formerly Used Defense Sites (FUDS) Database

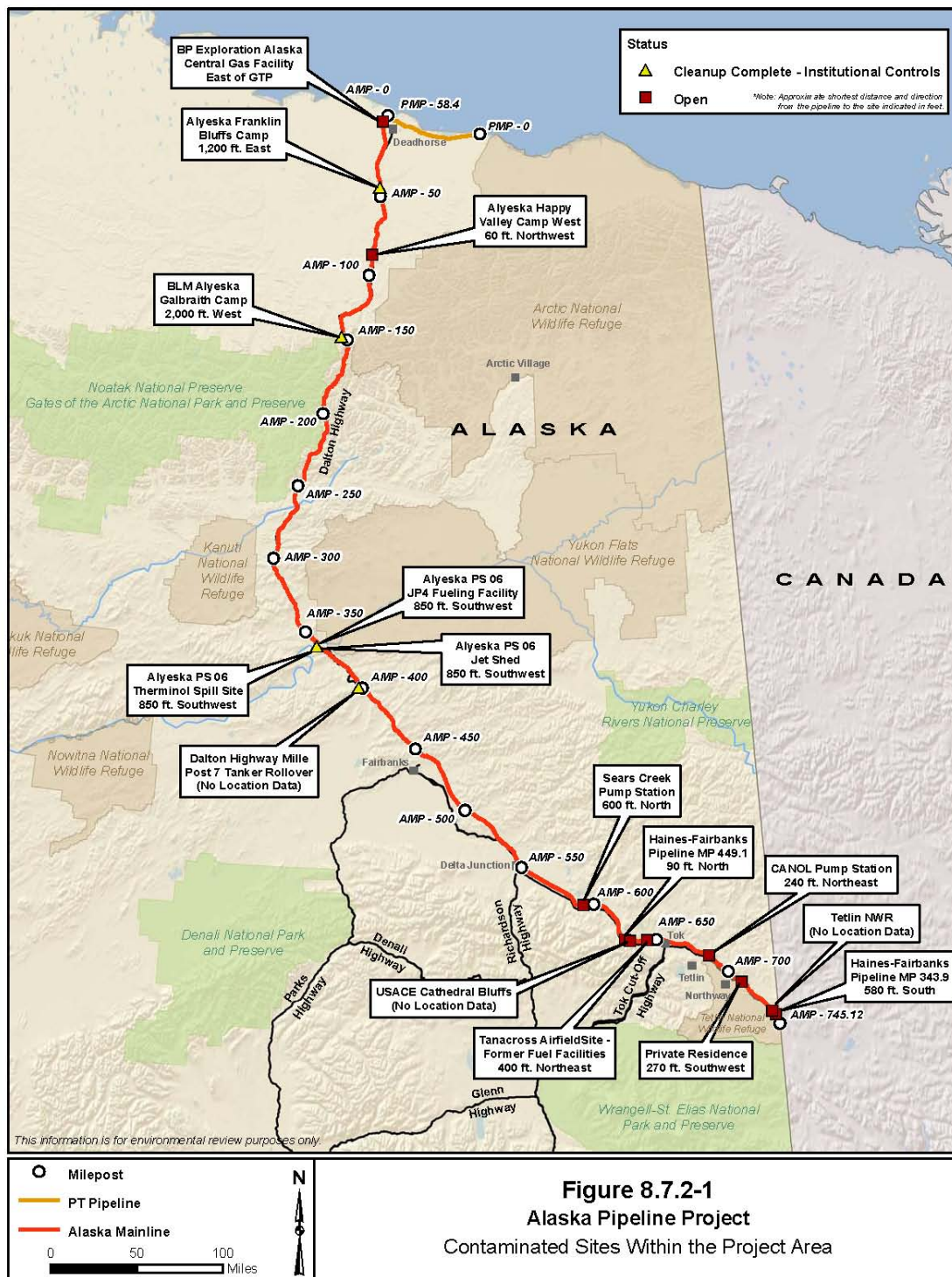
Only the ADEC CSD and LUST databases and the U.S. Environmental Protection Agency (EPA) NPL identified contaminated sites located within the Project area.


### 8.7.1 ENVIRONMENTAL PROTECTION AGENCY NATIONAL PRIORITY LIST

A search of the EPA web site was conducted to identify NPL sites within or in proximity to the Project area. The NPL, also known as the Superfund list, identifies those sites where environmental contamination has been documented and where the EPA has conducted investigation and mitigation. The Project is located in proximity to four NPL sites as follows:

- Fort Wainwright is a 918,000-acre U.S. Army installation located on the east side of Fairbanks. APP is located at least 5 miles away from the listed contaminant source areas. Based on the APP location relative to the contaminant source areas, it is not expected that environmental impacts on soils will be encountered in the Project vicinity;
- Alaska Batteries Enterprises is a delisted NPL site located approximately 1.5 miles south of Fairbanks, or more than 5 miles away from APP. Based on the APP location relative to the contaminant source areas, it is not expected that environmental impacts on soils will be encountered in the Project vicinity;
- Arctic Surplus is a 25-acre site located adjacent to Fort Wainwright and is more than 5 miles away from APP. Based on the APP location relative to the contaminant source areas, it is not expected that environmental impacts on soils will be encountered in the Project vicinity; and
- Eielson Air Force Base (AFB) is a 19,700-acre military installation located approximately 24 miles southeast of Fairbanks. Although the Project crosses Eielson AFB, based on the APP location relative to the contaminant source areas, it is not expected that environmental impacts on soils will be encountered in the Project vicinity.





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APP is currently consulting with representatives of the Eielson AFB on routing of the Alaska Mainline within the AFB (refer to Section 10.5 of Resource Report 10). **[Note: APP is evaluating these sites and will provide updated information in the final report.]**

### 8.7.2 ALASKA CONTAMINATED SITES PROGRAM

All reported contaminated sites, underground storage tanks, and LUST sites present in the State of Alaska are listed and tracked through the ADEC Contaminated Sites Database (ADEC 2011). ADEC classifies its CSD sites into the following categories:

1. Closed: Formally closed or deemed to have no further action required. Sites are closed when the level of cleanup achieved has reached the strictest levels established in state regulations or the possibility of human exposure to any residual contamination is deemed highly unlikely.
2. Closed with institution controls: Conditionally closed for which ADEC requires the landowner to maintain land use and/or activity controls to protect human health and the environment for future exposure. Cleanup at these sites has been completed to an extent that is either practical or possible, but requires conditions, referred to as institutional controls.
3. Open: Formal closure has not been declared and cleanup/remediation goals have not been met.

APP's review of the ADEC CSD indicated that there are five closed sites, four closed sites with institution controls, and nine opens sites located along the Alaska Mainline (Table 8.7.2-1). No sites were identified along the PT Pipeline. Although there is residual contamination at closed sites with institution controls, these sites were granted a conditional closure by ADEC because controls were instituted to mitigate the risk of environmental contamination posing a threat to human health and the environment. Therefore, contamination may be encountered if soils at these sites are disturbed (refer to Figure 8.7.2-1).

TABLE 8.7.2-1 Alaska Pipeline Project Description of Alaska Department of Environmental Conservation Contaminated Sites within the Project Area				
Site Name	Location in Project Area (AMP)	ADEC Classification	Matrix	Description of Contamination
Alyeska Franklin Bluffs Camp	44.5 (Construction Camp)	Closed with Institutional Controls	Soil, surface water	Diesel fuel spill on camp pad migrating to nearby wetlands.
Alyeska Happy Valley Camp West	88.0	Open	Soil, groundwater, surface water	Petroleum-impacted soil; petroleum-impacted hydrocarbons previously identified in groundwater and nearby surface water (Happy Valley Creek) in the past; however, 2009-2010 sampling events indicate that surface water and groundwater had petroleum hydrocarbon concentrations below ADEC clean-up levels.
BLM Alyeska Galbraith Lake	146.0 (Construction Camp)	Closed with Institutional Controls	Soil, surface water	Diesel fuel spill on camp pad; disturbance of subsurface is prohibited.
Dalton Highway Milepost 7 Tank Rollover	397.0 (Borrow source)	Closed with Institutional Controls	Soils	Diesel fuel spill; work plan required for instances where ground disturbance is proposed.



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TABLE 8.7.2-1				
Alaska Pipeline Project				
Description of Alaska Department of Environmental Conservation Contaminated Sites within the Project Area				
Site Name	Location in Project Area (AMP)	ADEC Classification	Matrix	Description of Contamination
Alyeska Milepost 400 Bullet Hole Spill	408.0	Closed with Institutional Controls	Soils	Crude oil spill impacted vegetation mat and soil.
Sears Creek Pump Station	593.0	Open	Soil	Uncharacterized contamination at former burn pit; groundwater monitoring results indicated that contaminant levels do not exceed the ADEC groundwater quality standards in any sampling results.
Haines-Fairbanks Pipeline (MP 449.1)	630.0	Open	Soil	Diesel-impacted soils; no additional information available. No remedial activities have occurred.
Cathedral Bluffs ACSR Site	631.0	Open	Soil	Soil contamination; no groundwater monitoring activities were identified. EPA concluded in 1993 that the primary hazards were physical and no additional environmental recommendations or plans for remediation were made.
Tanacross Airfield Former Fuel Facilities	643.0	Open	Soil, groundwater	Diesel contamination of soil and groundwater above ADEC cleanup levels. Groundwater most likely flows toward the north, cross gradient to down gradient from the APP Project area.
Canol Pump Station J	682.0	Open	Soil	Diesel, volatile organic compound (VOC), semi-volatile organic compounds (SVOC), and heavy metal contamination of soils. Contamination has not been fully characterized and no groundwater sampling information available.
Private Residence	710.0	Open	Soil	Diesel-contaminated soils; groundwater has not been encountered during excavation efforts.
Haines-Fairbanks Pipeline (MP 343.9)	739.0	Open	Soil	Diesel-impacted soils; no additional information available. No remedial activities have occurred.
Tetlin National Wildlife Refuge	742-745	Open	Unknown	Potential contamination associated with the Northway Staging Field, Haines-Fairbanks Pipeline, and Canadian-American Northern Oil Line Pipeline
Source: ADEC 2011				

In addition to the sites identified in Table 8.7.2-1, the BP Exploration Alaska (BPXA) CGF located near the eastern boundary of the GTP site (refer to Appendix 1B of Resource Report 1), is listed as an open contaminated site. The listing is a result of a 1995 Therminol (liquid phase heat transfer fluid) spill. Analytical results of samples collected in 1999 indicate that gasoline range organics (GRO), diesel range organics (DRO), and benzene, toluene, ethylbenzene, and xylene (BTEX) at concentrations above ADEC cleanup levels for soil, surface and groundwater were detected at the site; monitoring efforts are ongoing (ADEC 2011). The ADEC Project Manager for the BP Exploration Alaska CGF reports that off-site migration of the contamination is limited and does not have the potential to impact the GTP.

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### 8.7.3 LANDFILLS

The Oxbow Landfill, located in the southeastern corner of the Put-23 mine site, was previously listed as an open contaminated site on the ADEC CSD; however, in 2007, the ADEC determined it was a non-qualifying site and management of the site was transferred to the ADEC Solid Waste Program. The site was placed on Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) in 1981 for presence of aromatic compounds and polynuclear aromatic hydrocarbons (PAHs) found in the soil. Extent of contamination is unknown. The Oxbow Landfill is permitted by ADEC as a Class I facility and accepts the following approved waste types: ash, contaminated soil, drilling and industrial waste, inert waste, municipal waste, and sludge. The adjacent Put-23 mine site will be used as a source of gravel for the Project.

[Note: APP will update the information in this section in the final report.]

### 8.7.4 CONSTRUCTION AND OPERATION IMPACTS AND MITIGATION

If contaminated or suspect soils are identified during trenching and/or grading operations, APP will implement its Construction Unanticipated Discoveries Plan. The type and extent of contamination, and local, state, and federal regulations will determine the appropriate mitigation for these areas. [Note: APP is developing the Construction Unanticipated Discoveries Plan and will provide an update in the final report.]

## 8.8 VISUAL RESOURCES

### 8.8.1 EXISTING VISUAL ENVIRONMENT

The landscape along the pipeline route in Alaska is a combination of flat tundra, noncontiguous permafrost, rolling hills, evergreen and hardwood forest, and river valleys bordered by steep mountain passes. Prudhoe Bay is home to oil fields, wells, drill pads, roads, pipelines, and refineries, as well as supporting infrastructure (e.g., airports, camps).

### 8.8.2 FEDERAL AND STATE VISUAL RESOURCES MANAGEMENT OBJECTIVES


Based on a review of the various land management plans for federal and state lands, BLM and DOD have established a classification system for lands under their management. FWS and TVSF have recognized reducing visual impacts in specific management units. The State of Alaska has designated the Dalton, Richardson (North Segment), and Steese Highways as Scenic Byways, which carry goals relating to maintaining scenic visual quality.

#### 8.8.2.1 U.S. Bureau of Land Management

Based on the visual resource inventory and balanced with other resource values, VRM classes are assigned to BLM public lands. The classifications define management objectives for a given area and include the following based on BLM's VRM Manual 8410 (2011d).

- **Class I Objective.** The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.
- **Class II Objective.** The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low.



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Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

- Class III Objective. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
- Class IV Objectives. The objective of this class is to provide for management activities, which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

The BLM is mandated by law to manage its scenic resources so that visual quality is protected for present and future generations (Federal Land Policy and Management Act 1976). Proposed activities that require modification of the landscape must make a reasonable attempt to minimize visual impacts.

#### **Arctic Field Office and Central Yukon Field Office**

Based on BLM's Utility Corridor RMP/EIS (1991):

- The Dalton Highway RMA, which generally corresponds to the "inner" Utility Corridor and the area between approximate AMP 61.5 and AMP 367.7, is classified as VRM IV; sight-seeing is considered a primary recreational use related to visual resources; and
- The Dalton Corridor RMA, which generally corresponds to the remainder of the Utility Corridor, is classified as VRM Class III.

In addition to the VRM classifications, BLM has identified scenic quality units within the Utility Corridor RMP/EIS' planning area. Table 8.8.2-1 describes the unit, class, and characteristics of these areas.


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TABLE 8.8.2-1		
Alaska Pipeline Project Scenic Unit Characteristics of the Utility Corridor Resource Management Plan Planning Area Crossed by the Project		
Scenic Quality Unit <sup>a</sup>	Class <sup>b</sup>	Characteristic
North Slope	C	Low rolling hills covered with tundra. Uniform color.
Foothills	B	Gently sloped highlands. Color uniform. No unique features.
Brooks Range	A	Highly varied landscape. Wide variety of color. Numerous rivers and lakes. Area is unique.
Dietrich/Koyukuk	A	Predominantly mountainous. Color highly varied. Vegetation varied. Moderately unique.
Koyukuk Drainages	B	Little visual variety. Vegetation varies. Area not unique visually.
Arctic Circle Highlands	C	Rolling hills. Color lacks variety. No significant unique natural features.
Fort Hamlin Hills	B	Small hills and drainages. Marked color variation. Visual variety present.
Yukon River	A	River cuts through canyons. Seasonal color of high diversity. Unique features in Corridor.
<sup>a</sup> Scenic quality is a measure of the appeal of an area of land. Lands are given a rating based on seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity and the effect (positive or adverse) of human modifications to a landscape. <sup>b</sup> Scenic Quality Class A - Distinctive landscapes of outstanding visual quality. Scenic Quality Class B - Areas that, although pleasing to the eye, tend to be common throughout a landscape. Scenic Quality Class C - Areas where features offer only minimal variety and lack visual quality. Includes all areas not included in classes A and B. Source: BLM 1991.		

### Eastern Interior Field Office

Based on a review of BLM's Fortymile Management Framework Plan (1980), there are no VRMs assigned to specific areas. The plan references the need to inventory and analyze physiographic regions, develop scenic quality rating units, identify ACECs for scenic values, and rewrite planning area analyses relating to visual sensitivity. However, there currently is no known inventory.

### Fort Wainwright and Eielson Air Force Base

Lands within the Fort Wainwright and Eielson Air Force Base are classified as VRM IV (BLM 1995).

#### 8.8.2.2 State of Alaska


### Tanana Valley State Forest

As identified in the TVSF Management Plan (2001), visual and/or scenic characteristics are a management consideration in relation to activities that produce visual disturbance in important waterfowl habitat; subsurface mining activities; protecting natural and cultural resources from scenic degradation; avoiding adverse impacts on recreational scenic values as a result of development activities (e.g., timber harvesting); and Management Units affected by APP (refer to Tables 8.4.2-4 and 8.4.2-5).

### Scenic Byways

As discussed in Section 8.5, APP will cross the Dalton, Steese, and Richardson Highways, which are recognized as state-designated scenic byways. Comprehensive Conservation Plans (CCPs) have been developed for the Dalton and Richardson Highways in an effort to promote certain features, including scenic viewpoints, along those highways.



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Along the Dalton Highway these include locations at (north to south) the Sagavanirktok River Overlook, Happy Valley, Galbraith Lake, Atigun Pass, Chandalar Shelf, Farthest North Spruce, Sukakpak Mountain, South Fork Koyukuk, Grayling Lake, Gobblers Knob, Arctic Circle, Finger Mountain, 86 Mile Overlook, Visitor Contact Station, and Hess Creek Overlook (ADNR Division of Parks and Outdoor Recreation 2010).

Similarly, along the Richardson Highway scenic features include Galloping Glacier, Will Memorial Range Overlook, and about a dozen other unnamed scenic viewpoints (TranSystems and HDR Inc. 2009).

### **8.8.3 CONSTRUCTION AND OPERATION IMPACTS AND MITIGATION**

#### **8.8.3.1 Pipeline Facilities**

The visual impact associated with the construction will be temporary and limited to the construction phase of the Project, except in forested areas where a cleared right-of-way will be maintained for operation of the pipeline and in areas where Aboveground Facilities will be installed. However, because APP is collocated with existing road and pipeline infrastructure for most of the length through federal and state lands, and parts of the APP route are within an existing utility corridor for much of its length, the visual impacts of the APP facilities will not be out of place with the existing infrastructure and visual resources management objectives.


During construction, the movement of soil and use of heavy equipment will result in temporary visual changes to the landscape. These effects may be evident to users of local roads, nearby residents, and recreationalists in the vicinity of the Project, but the effects will be relatively short in duration and will dissipate as vegetation becomes reestablished on the right-of-way following construction.

Open areas of tundra habitat may experience longer-term visual effects. Because of the cold temperatures and short growing season, reestablishing tundra vegetation can be difficult and slow. It is anticipated that revegetation of tundra over permafrost will require more than a decade.

Clearing of forested areas will also produce long-term changes to the Project area. Construction and operations will occur within the federally designated utility corridor, which already recognizes the effects associated with a cleared utility right-of-way. Clearing will convert existing forested areas to open areas and result in a new right-of-way with distinctive edges. Locating the Project adjacent to other rights-of-way in forested areas will reduce visual impacts since the other rights-of-way are already prominent features in the landscape and no new lines or features will be introduced.

Some terrain will experience visual impacts as a result of grading and/or placing gravel on the right-of-way. Grading will be required in areas with steep slopes. Alteration of the landscape will be evident for several years, but as with areas where gravel will be placed on the right-of-way, the majority of the locations have limited existing infrastructure and the pipeline generally follows other rights-of-way and man-made features (e.g., TAPS, highways, Aboveground Facilities).

As identified in Table 1.3.1-4 of Resource Report 1, portions of the pipeline may be installed aboveground across known fault locations to mitigate the potential for displacements due to seismic activity. Section 1.6.3.7 of Resource Report 1 discusses the construction methods for geologic fault crossings. If an aboveground pipeline section is adopted at these locations,

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permanent visual impacts will occur, but will not be inconsistent with the TAPS pipeline installed above-grade at these same fault crossings. APP will consult with applicable agencies to discuss additional mitigation measures to potentially reduce visual impacts along the highways, and to discuss construction methods and reclamation.

APP will also complete a Plan of Development in support of its Right-of-Way Grant and Temporary Use Permit application to cross federal lands.

#### **8.8.3.2 Aboveground Facilities**


The GTP site and many Aboveground Facilities will be located within or adjacent to existing commercial/industrial areas. Aboveground Facilities will be permanent and will remain in operation throughout the life of the pipeline. The impacts on visual resources from each individual facility will depend on the preconstruction condition and the visibility from the surrounding area. Many of the Aboveground Facilities in the North Slope Borough will be constructed within or adjacent to the GTP site and/or within an area devoted to oil and gas development, which already experiences a visual impact from existing facilities (e.g., TAPS). Other Aboveground Facilities such as launchers/receivers will be constructed and operated within compressor or meter station sites. MLBVs located outside of a compressor or meter station site will be constructed and operated within the boundaries of the temporary and permanent right-of-way, respectively. Further, much of the Project will be located within a federally designated utility corridor, which has been established to allow for oil and gas development projects. Therefore, impacts on visual resources resulting from construction and operation of the Aboveground Facilities within the Prudhoe Bay area and relatively smaller facilities (e.g., MLBVs) will be minimal as the area has already experienced commercial/industrial visual impacts.

The most substantive long-term visual impacts as a result of Aboveground Facilities will be limited to those that will be located outside of a designated utility corridor on federal and state lands where VRMs or equivalents have been designated. Table 8.2.3-1 identifies the existing land ownership associated with each Aboveground Facility site; Section 8.8.2 discusses visual objectives for federal and state lands. Compressor stations located outside of areas already devoted to a utility corridor or oil and gas development will result in relatively greater long-visual impacts. APP will work with the appropriate federal and state agencies to mitigate to the extent practicable the visual impacts associated with these facilities. APP will also complete a Plan of Development in support of its Right-of-Way Grant and Temporary Use Permit application to cross federal lands.

#### **8.8.3.3 Associated Infrastructure**

Infrastructure associated with APP is primarily located along the PT Pipeline or Alaska Mainline, or within BLM's Utility Corridor, or at a previously established site. Therefore, the VRM and other federal or state visual or scenic quality prescriptions for this infrastructure are the same as those associated with the pipeline or Aboveground Facility at a specific MP location. Additionally, APP has attempted to locate the Associated Infrastructure at sites that have been previously disturbed for use.

As previously discussed, the majority of Associated Infrastructure will be temporary or consist of an existing facility where impacts on visual resources are already evident or associated with an Aboveground Facility discussed above. APP will work with the appropriate federal and state agencies to mitigate to the extent practicable the visual impacts associated with these facilities.

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APP will also complete a Plan of Development in support of its Right-of-Way Grant and Temporary Use Permit application to cross federal lands.

## 8.9 CUMULATIVE IMPACTS


[Note: Field surveys and agency consultation are on-going. Cumulative impacts will be updated in the final report.]

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