

APPENDIX P

Special Status Species Lists

APPENDIX P: Special Status Species Lists

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TABLE P-1

Bureau of Land Management (BLM) Sensitive and Watch List Species Associated with the Mainline Facilities

Species ^a	BLM Status	Description	Alaska Region ^b	Habitat
Birds				
Aleutian tern (<i>Onychoprion aleuticus</i>)	Sensitive	Medium-sized tern; underparts are white, crown and mantle speckled white, and tail gray with white sides; differentiated from similar species by dark bar on secondaries.	Restricted to coastal areas throughout the Aleutian Islands, north to the southeastern Chukchi Sea and east to the Alaska Peninsula, Yakutat, and Glacier Bay; most of the Alaska population is concentrated in the Gulf of Alaska	Breeding habitat includes vegetated islands, shrub-tundra, grass and sedge meadows, and freshwater marshes; habitat during migration is pelagic
American golden plover (<i>Pluvialis dominica</i>)	Watch List	Stocky, medium-sized shorebird with a short bill; breeding males have a white crown stripe extending down the side of the neck, underparts are black, upperparts are mottled gold, white, and black; breeding females look like males, but are paler overall with brown or whitish cheeks	Breeds through north and central Alaska, including Seward Peninsula, then south along Norton Sound to Cape Romanzof. Migrant from southeast Alaska to Cook Inlet Basin Subregion.	Nests on grassy tundra preferring dry upland areas; nest in sparse lower vegetation on higher well-drained rocky slopes; migratory habitat includes tidal flats and tundra
Bar-tailed godwit ^c (<i>Limosa lapponica</i>)	Sensitive	Sandpiper family; large, noisy, cinnamon-colored shorebird; longest nonstop migration flight of any shorebird species, covering over 7,000 miles	Beaufort Coastal Plain and Brooks Foothills Subregions	Nests on sedge meadows and coastal tundra. Staging in nearshore estuarine areas and beaches; observed nesting on coastal tundra adjacent to Prudhoe Bay
Bank swallow (<i>Riparia riparia</i>)	Watch List	Small songbird with a small head and tiny bill; adults are brown above with a brown breast band and a white swoosh on the neck	Breeds in south-coastal and southeast Alaska primarily within Coast Mountain Boreal Ecoregion	Occupy open habitat; frequently near water; nests in barns or other buildings, under bridges, in caves or cliff crevices
Bering Sea rock sandpiper (<i>Calidris ptilocnemis tschuktschor</i>)	Sensitive	Sandpiper family; shorebird speckled and well camouflaged against gray boulders	Cook Inlet Basin Subregion and Bering Sea Islands	Nests on tundra of Bering Sea islands; winters along rocky coasts of Aleutian Islands
Blackpoll warbler (<i>Setophaga striata</i>)	Watch List	Wood warbler family; black and white warbler molts into yellow-green plumage and loses black cap	Beringia Boreal and Coast Mountains Boreal Ecoregions	Cool, wet boreal coniferous forest, primarily spruce; along rivers, streams, or bogs near shrub thickets
Buff-breasted sandpiper (<i>Calidris subruficollis</i>)	Sensitive	Small sandpiper, short bill and round head similar to plover appearance; lek mating system	Beaufort Coastal Plain and Brooks Foothills Subregions	Nests on tundra; uses tidal marshes during migration
Dunlin articola (<i>Calidris alpina arctica</i>)	Sensitive	Small sandpiper, breeding plumage in includes black belly and rufous back; nonbreeding plumage is gray and nondescript	Most common between Point Barrow and Prudhoe Bay; high fall concentration at Colville River Delta and found along Beaufort Sea coast; in the spring, found along Chukchi Sea coast	Moist-wet tundra, in areas with ponds, polygons, and commonly found in recently formed landscapes such as drained thaw lakes and sedge-grass marshes

TABLE P-1 (cont'd)

Bureau of Land Management (BLM) Sensitive and Watch List Species Associated with the Mainline Facilities

Species ^a	BLM Status	Description	Alaska Region ^b	Habitat
Golden eagle ^d (<i>Aquila chrysaetos</i>)	Watch List	Large, broad wings with dark brown body that has golden sheen on the back of head and neck; young have white patches at base of tail and in wings	Widespread throughout Alaska except rare in Kodiak and south-coastal and southeast Alaska	Open to semi-open country such as arctic and alpine tundra especially in hilly or mountainous terrain; near and above timberline
Gray-headed chickadee (<i>Poecile cinctus lathamii</i>)	Sensitive	Small songbird with gray-brown cap, white cheeks, and black bib; upperparts are grayish-brown, breast and belly whitish	Western and central Alaska, east-central Alaska between upper Tanana and Yukon Rivers from the White Mountains to the Canada border	Boreal coniferous forests, primarily spruce; common in stream basins, willow and aspen thickets; nests in cavities of trees
Gyr Falcon (<i>Falco rusticolus</i>)	Watch List	Large falcon; adults' underparts generally horizontally barred posteriorly and spotted anteriorly; bare parts yellow; no seasonal variation in plumage	Most common north of the Brooks Range, in parts of the Alaska Range Subregion; distributed throughout tundra locations	Tundra, open coniferous forest, mountainous regions, and rocky seacoasts; generally in coastal areas in winter
Hudsonian godwit (<i>Limosa haemastica</i>)	Sensitive	Large shorebird with long, slightly upturned bill with dark tip and reddish base; long legs, white stripe in wings and white rump	Kobuk Ridges and Valleys, Alaska Range, and Cook Inlet Basin Subregions	Marshes, beaches, flooded fields, and tidal mudflats; nests on grassy tundra, near water
Olive-sided flycatcher (<i>Contopus cooperi</i>)	Sensitive	Large, stocky flycatcher with large head and short tail; white center of breast in contrast to gray sides	Widespread throughout Alaska except rare in Arctic Tundra Ecoregion	Forest and woodland habitats including taiga, subalpine coniferous forest, edges of forest ponds, lakes, streams; nesting sites contain dead standing trees
Red knot (<i>Calidris canutus</i>)	Sensitive	Large, bulky sandpiper with relatively short, straight bill tapering to tip, legs short and thick, head and breast reddish during breeding and gray when non-breeding	Beaufort Coastal Plain, Brooks Foothills, and Cook Inlet Basin Subregions; Seward Peninsula, Kenai Peninsula, and Aleutian Islands	Breed in drier tundra areas such as sparsely vegetated hillsides; non-breeding season can be found in intertidal, marine habitats near coastal inlets, estuaries, bays
Red-throated loon ^e (<i>Gavia stellate</i>)	Sensitive	Smallest of the loons with thin bill that turns slightly upward, dark gray with a red throat during breeding, pale gray and white in winter; sits low on water	Beaufort Coastal Plain, Brooks Foothills, Brooks Range, Alaska Range, and Cook Inlet Basin Subregions; western coastal ecoregions	Breeds in tundra wetlands, bogs, and forest ponds; winters in shallow marine habitat
Rusty blackbird (<i>Euphagus carolinus</i>)	Sensitive	Medium-sized blackbird with slender bill and medium-length tail; winter plumage males have rusty feather edges, pale yellow eye, females are gray-brown, breeding males are dark glossy black	Widespread throughout Alaska except Beaufort Coastal Plain Subregion and rare in Brooks Foothills Subregion	Wet forests including bogs, fens; winters in swamps, wet woodlands, and pond edges
Short-eared owl (<i>Asio flammeus</i>)	Watch List	Black-rimmed yellow eyes and pale facial disk, broad wings with smoothly rounded tips, short tail, brown spotted with buff and white on upperparts	Widespread throughout Alaska	Large, open areas with little vegetation including tundra, marshes, and coastal grasslands

TABLE P-1 (cont'd)

Bureau of Land Management (BLM) Sensitive and Watch List Species Associated with the Mainline Facilities

Species ^a	BLM Status	Description	Alaska Region ^b	Habitat
Short-billed dowitcher (<i>Limnodromus griseus</i>)	Watch List	Medium-sized shorebird with a long, football-shaped body and long straight bill; breeding birds have variable amounts of cinnamon coloring on their bodies	Breeds in south-coastal Alaska including Cook Inlet Basin Subregions; Prince William Sound, Yakutat Bay, and Kodiak archipelago; use Gulf of Alaska and Prince William Sound during migration	Nests in grassy or mossy tundra and wet meadows; prefer shallow salt water with soft muddy bottom, but will visit various wetlands during migration
Smith's longspur (<i>Calcarius pictus</i>)	Sensitive	Medium-sized songbird; breeding males have buff tan breast, abdomen, chin, and nape; head boldly patterned black and white; white ear patch; breeding females are duller buff with a streaked crown, breast, and sides	Common migrant and breeder in the eastern Brooks Range Subregion and in the northern foothills and uplands of southeastern central Alaska	Forest-tundra transition zone at the northern edge of the boreal tree-line. Breeding habitat includes dry, grassy, and hummocky tundra; damp alpine or arctic tundra or in wet meadows in forested areas, usually inland from the coast
Townsend's warbler (<i>Setophaga townsendi</i>)	Watch List	Small songbird, yellow chest and face with black in throat, stripes down sides of chest, two white wing bars	Cook Inlet Basin and Alaska Range Subregions	Coniferous forests
Trumpeter swan (<i>Cygnus buccinator</i>)	Watch List	Largest waterfowl with heavy bodies and long necks; white with black bill and legs	Cook Inlet Basin and Alaska Range Subregions, portions of Beringia Boreal Ecoregion and Brooks Range Subregion	Shallow, undisturbed freshwater with abundant aquatic plants; need at least 100 yards (91 meters) of open water for take-off
Whimbrel (<i>Numenius phaeopus</i>)	Sensitive	Large shorebird of the curlew species; long, decurved bill; upperparts dark brown marked with pale buff, underparts pale buff; neck and breast streaked with dark brown; no seasonal variation between male and females	Widespread throughout Alaska where it is common in Cook Inlet and Yukon-Kuskokwim delta during migration	Nests in sedge-shrub tundra, sedge-meadow, and bogs; non-breeding habitat includes beaches, tidal mudflats, marshes, estuaries, tidal creeks, sandy or rocky shores, flooded fields, and pastures
Yellow-billed loon ^e (<i>Gavia adamsii</i>)	Sensitive	Large, dagger-bill diving bird	Beaufort Coastal Plain, Brooks Foothills, and Brooks Range Subregions	Tundra lakes in summer, feeding on rivers and coastal lagoons; coastal waters in winter
Mammals				
American marten (Kenai subspecies) (<i>Martes americana kenaiensis</i>)	Watch List	Smaller than interior Alaska marten, thought to have longer tails and darker pelage	Cook Inlet Basin Subregion; restricted to Kenai Peninsula and adjacent regions	Dense deciduous or mixed coniferous forests; may use rocky alpine areas; large, old trees
Little brown bat (<i>Myotis lucifugus</i>)	Watch List	Small, brown bat with cinnamon-buff to dark brown above, buffy to pale gray below; hairs on back have long glossy tips; ear when laid forward reaches approximately the nostril; tragus about half as high as ear; calcar without keel	Widely distributed during summer with northernmost record near Fairbanks; uncommon in interior Alaska	Wide range of habitats including human-made structures for resting and maternity sites; caves and hollow trees in temperate forests

TABLE P-1 (cont'd)				
Bureau of Land Management (BLM) Sensitive and Watch List Species Associated with the Mainline Facilities				
Species ^a	BLM Status	Description	Alaska Region ^b	Habitat
Northern bog lemming (<i>Synaptomys borealis</i>)	Watch List	Small, short-tailed lemming with reddish-brown coat on the back and gray on the belly; coat is long; ears extend beyond the body fur and are sparsely haired on the edge	South of the Brooks Range throughout Alaska except the Aleutian Islands	Bogs, wet meadows, moist mixed boreal forests where it occupies burrow systems up to 1 foot deep; can also be found near rocky cliffs
Arctic ground squirrel ^f (<i>Urocitellus parryii</i>)	Watch List	Social, living in groups of 5 to 50; dig extensive burrow system	Widely distributed and common throughout arctic and subarctic northern, eastern, and southwestern Alaska including all designated subspecies	Tundra; subalpine brushy meadows; roadsides; riverbanks; not in permafrost areas
Invertebrates ^g				
Active bumble bee (<i>Bombus neoboreus</i>)	Watch List	Strictly arctic bumble bee species	Unknown	Grassland
Alaska sallfly (<i>Alaskaperla ovibovis</i>)	Sensitive	Stoneflies (order <i>Plecoptera</i>) are a small order of insects with an immature larval stage this is entirely aquatic in North America	Throughout Alaska	Freshwater habitats, typically including flowing waters (e.g., lakes, ponds, wetlands, streams, and rivers)
Ashton cuckoo bumble bee, gypsy cuckoo bumble bee (<i>Bombus bohemicus</i>)	Sensitive	Large bumble bee; nest parasite of other bumble bees	Specimen has been recorded in Wasilla, Alaska and farther north in Alaska	Grassland, shrubland, and forests
Brown elfin (<i>Callophrys augustinus</i>)	Watch List	Small butterfly (<i>Lycaenidae</i>). Caterpillars color varies with geography, adult butterflies are brown to grayish.	Unknown	Mixed conifer forests, barrens, bogs, and sandy coasts
Bumble bee (no common name) (<i>Bombus kluanensis</i>)	Sensitive	Newly described species, similar in appearance to <i>B. neoboreus</i> .	Alaska Range to western Canada	Unknown
Central bumble bee (<i>Bombus centralis</i>)	Watch List	Generalist forager.	Alaska Range	Grassland and shrubland
Confusing bumble bee (<i>Bombus perplexus</i>)	Sensitive	Boreal bumble bee species	Central Alaska, between the Brooks and Alaska Ranges	Forests and wetlands
Eskimo Arctic (<i>Oeneis alpine</i>)	Watch List	Medium sized brown butterfly (<i>Nymphalidae</i>).	Low arctic of northeastern Alaska	Adults associated with bare rock, talus, or scree and tundra. Breed in wet grassy tundra
Hoary elfin (<i>Callophrys polios</i>)	Watch List	Medium sized butterfly (<i>Lycaenidae</i>).	Eastern Alaska	Hardwood and mixed forests, conifer and mixed woodlands, bogs and fens

TABLE P-1 (cont'd)

Bureau of Land Management (BLM) Sensitive and Watch List Species Associated with the Mainline Facilities

Species ^a	BLM Status	Description	Alaska Region ^b	Habitat
Indiscriminate cuckoo bumble bee (<i>Bombus insularis</i>)	Watch List	Nest parasite of other bumble bees; species is not host specific but uses a variety of host plants	Unknown	Forest, grassland, and shrubland
Mayfly (no common name) (<i>Acentrella feropagus</i>)	Sensitive	Mayflies (order <i>Ephemeroptera</i>) are an order of insects with an immature larval stage that is entirely aquatic	Only in North Slope and Yukon-Koyukuk regions of Alaska	Freshwater habitats, typically including flowing waters (e.g., lakes, ponds, wetlands, streams, and rivers)
Northern yellow bumble bee, great yellow bumble bee (<i>Bombus distinguendus</i>)	Sensitive	Only known to occur in Alaska	Widespread northern Palearctic species that is also found in the Aleutian Islands Archipelago	Grassland and shrubland
Sitka bumble bee (<i>Bombus sitkensis</i>)	Watch List	Generalist forager	Coastal mountain ranges	Grassland
Suckley's cuckoo bumble bee (<i>Bombus suckleyi</i>)	Sensitive	Nest parasite of <i>Bombus occidentalis</i> complex bumble bees	Southern Alaska	Forest, grassland, and shrubland
Two form bumble bee (<i>Bombus bifarius</i>)	Watch List	Generalist forager	Southeastern Alaska	Forest, grassland, and shrubland
Western bumble bee (<i>Bombus occidentalis</i>)	Watch List	Generalist forager. Important pollinator species	Throughout Alaska, except for the northern coasts	Shrubland and grassland
Fish ^h				
Alaskan brook lamprey (<i>Lethenteron alaskense</i>)	Sensitive	Nonparasitic; freshwater lamprey grows to be 5 to 7 inches long as adult	Tanana-Kuskokwim Lowlands, Alaska Range, and Cook Inlet Basin Subregions	Creeks with riffles, medium rivers; benthic
Chinook salmon (Beaver Creek and Yukon River) (<i>Oncorhynchus tshawytscha</i>)	Watch List	Anadromous fish; largest of all Pacific salmon; adults have black irregular spotting on the back and dorsal fins and on both lobes of the tail fin; black pigment along the gum line; ocean-stage adults are bluish-green on the back which fades to a silvery color on the sides and white on the belly	Freshwater streams and rivers (e.g., Yukon and Tanana Rivers); marine waters of Cook Inlet and Gulf of Alaska within the Cook Inlet Basin Subregion	Freshwater streams and rivers; marine waters; juveniles migrate through shallow-water habitats along shorelines
Plants				
Alaskan bluegrass (<i>Poa hartzii</i> ssp. <i>alaskana</i>)	Sensitive	Perennial grass, loosely tufted	Arctic Tundra Ecoregion, and Beaufort Coastal Plain and Brooks Range Subregions	Rivers bars, floodplains, active sand dunes

TABLE P-1 (cont'd)

Bureau of Land Management (BLM) Sensitive and Watch List Species Associated with the Mainline Facilities

Species ^a	BLM Status	Description	Alaska Region ^b	Habitat
Alaska moonwort (<i>Botrychium alaskense</i>)	Watch List	Perennial herb from caudex	Beringia Boreal and Coast Mountains Boreal Ecoregions; Kobuk Ridges and Valleys, Alaska Range and Cook Inlet Subregions	Shores, cliff ledges, scree, open gravelly slopes, open fields, meadows, woodlands
American vetch (<i>Vicia americana</i>)	Watch List	Perennial herb, single-stem vine from rhizomes	Beringia Boreal and Coast Mountains Boreal Ecoregions; Ray Mountains and Alaska Range Subregions	Open patches in swampy woods, road banks, fencerows, borders, mixed forests, meadows, foothill canyons, clearings
Arctic poppy (<i>Papaver gorodkovii</i>)	Sensitive	Perennial herb, tufted	Arctic Tundra Ecoregion; and Beaufort Coastal Plain, Brooks Foothills, and Brooks Range Subregions	River floodplains, gravel bars, rock outcrops, polygon tundra
<i>Artemisia tanacetifolia</i>	Watch List	Perennial herb from thick, branched, or simple caudex and taproot	Beringia Boreal and Coast Mountains Boreal Ecoregions; Yukon-Old Crow Basin, North Ogilvie Mountains, Yukon-Tanana Uplands, Tanana-Kuskokwim Lowlands, and Alaska Range Subregions	Bluff slopes above rivers, mountain slopes, mountain summits, lake shores
Barneby's locoweed (<i>Oxytropis arctica</i> var. <i>barnebyana</i>)	Watch List	Perennial herb	Arctic Tundra Ecoregion; Kobuk Ridges and Valleys, Brooks Range, Brooks Foothills and Beaufort Coastal Plain Subregions	Shrubland/chaparral
Bostock's Miner's-lettuce (<i>Montia vassilievii</i> ssp. <i>vassilievii</i>)	Sensitive	Perennial herb from rhizomes or stolons, rooting at nodes	Brooks Foothills, Yukon-Tanana Uplands, and Alaska Range Subregions	Alpine slopes, benches, and ridges; lake shores, rock outcrops, and stream banks occurring from 700 m to 1,900 m in Alaska
<i>Cypripedium parviflorum</i> var. <i>exiliens</i>	Watch List	Perennial herb from slender rhizomes and coarse, fibrous roots	Arctic Tundra Ecoregion; Brooks Range, Yukon-Old Crow Basin, and North Ogilvie Mountains Subregions	Slopes, rock outcrops, river bluffs
Drummond's cinquefoil (<i>Potentilla drummondii</i>)	Watch List	Perennial herb	Coast Mountains Boreal Ecoregion; Alaska Range and Cook Inlet Basin Subregions	Moist to dry meadows and adjacent slopes, in conifer woodlands, alpine tundra
Dunehead sedge (<i>Carex phaeocephala</i>)	Watch List	Perennial grass, densely cespitose	Coast Mountains Boreal Ecoregion; Alaska Range and Cook Inlet Basin Subregions	High-montane to alpine areas
False semaphoregrass (<i>Pleuropogon sabinei</i>)	Sensitive	Perennial grass from rhizomes	Arctic Tundra Ecoregion and Beaufort Coastal Plain Subregion	Lakeshores, stream banks, river banks, floodplains, marshes, mud flats
Eurasian junegrass (<i>Koeleria asiatica</i>)	Watch List	Perennial grass, tufted, from short to long rhizomes	Arctic Tundra Ecoregion; Beaufort Coastal Plain, Nulato Hills and Brooks Foothills Subregions	River terraces, river bluffs, river banks, river bars, sand dunes, tundra, alpine slopes, lake shores

TABLE P-1 (cont'd)

Bureau of Land Management (BLM) Sensitive and Watch List Species Associated with the Mainline Facilities

Species ^a	BLM Status	Description	Alaska Region ^b	Habitat
Field rush (<i>Juncus tenuis</i>)	Watch List	Perennial grass from rhizomes, tufted	Beringia Boreal Ecoregion; Ray Mountains Subregion	Disturbed soils, roadsides, meadows, springs and ditches
Fourpart dwarf gentian (<i>Gentianella propinqua</i> ssp. <i>aleutica</i>)	Watch List	Annual herb from taproot	Hypermaritime Coastal Ecoregion; Alaska Peninsula, Aleutian Islands, Gulf of Alaska Coast, Chugach-St. Elias Mountains, and Bristol Bay Lowlands Subregions	Well-drained grassy areas, floodplains, dry slopes, open soil
<i>Gentianopsis barbata</i> ssp. <i>barbata</i>	Watch List	Annual or biennial herb	Beringia Boreal and Coast Mountains Boreal Ecoregions; Tanana-Kuskokwim Lowlands, Yukon-Tanana Uplands and Alaska Range Subregions	Streams, meadows, scrub, forests
Glacier buttercup (<i>Ranunculus camissonis</i> ; <i>R. glacialis</i> var. <i>camissonis</i>)	Watch List	Perennial herb from short caudex	Arctic Tundra and Beringia Boreal Ecoregions; Brooks Range, Kotzebue Sound Lowlands, Seward Peninsula, Ray Mountains and Yukon-Tanana Uplands Subregions	Alpine slopes, seepage slopes, rock outcrops, beach ridges, alluvial fans, wet meadows, frost boils
Harold's milkvetch (<i>Astragalus robbinsii</i> var. <i>harringtonii</i>)	Watch List	Perennial herb with erect or ascending stem from a woody base	Coast Mountains Boreal Ecoregion; Cook Inlet Basin Subregion	Sandy or gravelly sites on ridge crests, floodplains, river terraces and subalpine and alpine meadows, open woodlands
Hairy lousewort (<i>Pedicularis hirsuta</i>)	Sensitive	Perennial herb from branched taproot	Arctic Tundra Ecoregion and Beaufort Coastal Plain Subregion	Beach terraces, tundra
Kamchatka buttercup (<i>Oxygraphis glacialis</i>)	Watch List	Perennial herb from thick, stout, vertical caudex	Arctic Tundra and Coast Mountains Boreal Ecoregions; Brooks Foothills, Brooks Range, Seward Peninsula, Ahklun Mountains, and Alaska Range Subregions	Rock outcrops, alpine slopes, alpine ridges, seepage slopes, frost boils, stream banks
Kokrines locoweed (<i>Oxytropis kokrinensis</i>)	Sensitive	Perennial herb, tufted, from branched caudex covered	Arctic Tundra, Bering Tundra, Subarctic Tundra, and Beringia Boreal Ecoregions; and Brooks Range, Kobuk Ridges and Valleys, Kotzebue Sound Lowlands, Yukon River Lowlands, Nulato Hills, Ray Mountains Subregions	Alpine ridges, alpine valleys
Largeflower fleabane (<i>Erigeron porsildii</i>)	Watch List	Perennial herb from rhizomes resembling taproots	Arctic Tundra, Beringia Boreal and Coast Mountains Boreal Ecoregions; Brooks Foothills, Brooks Range, Yukon-Tanana Uplands, Tanana-Kuskowim Lowlands, and Alaska Range Ecoregions	Cliffs and talus slopes, shale dominant gravel, grassy ravines, dry tundra

TABLE P-1 (cont'd)

Bureau of Land Management (BLM) Sensitive and Watch List Species Associated with the Mainline Facilities

Species ^a	BLM Status	Description	Alaska Region ^b	Habitat
Longleaf arnica (<i>Arnica lonchophylla</i> ssp. <i>lonchophylla</i> / <i>A.</i> <i>lonchophylla</i>)	Sensitive	Perennial herb from slender, branched rhizome	Beringia Boreal Ecoregion; and Ray Mountains, Yukon-Old Crow Basin, and Yukon-Tanana Uplands Subregions	River bars, river banks, mountain slopes, rock ledges
Longstem sandwort (<i>Arenaria longipedunculata</i>)	Watch List	Perennial herb, matted	Arctic Tundra and Beringia Boreal Ecoregions, Alaska Range and Cook Inlet Basin Subregions	Gravel, moist places in mountains
Mackenzie's River Douglasia (<i>Douglasia arctica</i> / <i>Androsace americana</i>)	Sensitive	Perennial herb from branched caudex, forming loose cushions	Beringia Boreal Ecoregion; and Yukon-Old Crow Basin, Ray Mountains, Tanana-Kuskokwim Lowlands, and Yukon-Tanana Uplands Subregions	Alpine slopes, alpine ridges, subalpine slopes, rock outcrops, bluffs, cliffs
Macoun's draba (<i>Draba macounii</i>)	Watch List	Perennial herb from branches or simple caudex, cespitose	Arctic Tundra and Coast Mountains Boreal Ecoregions; Brooks Range, Brooks Foothills, and Alaska Range Subregions	Rock outcrops, talus, tundra
Muir's fleabane (<i>Erigeron muirii</i>)	Sensitive	Perennial herb with thick taproot	Arctic Tundra Ecoregion	Alpine slopes, ridges, rock outcrops, river bluffs, terraces, pingos; scree, gravel rock; dry, snow banks
Mulligan's draba (<i>Draba mulliganii</i>)	Watch List	Perennial herb from many-branched caudex with persistent leaf remains	Arctic Tundra, Beringia Boreal and Coast Mountains Boreal Ecoregions; Brooks Range, North Ogilvie Mountains, Ray Mountains, Alaska Range, Kluane Ranges, and Chugach-St. Elias Mountains Subregions	Alpine slopes, alpine ridges, alpine bowls, glacial outwash, rock outcrops, river bluff
Northern sedge (<i>Carex deflexa</i> var. <i>deflexa</i>)	Watch List	Perennial sedge	Arctic Tundra, Beringia Boreal and Coast Mountains Boreal Ecoregions; Brooks Range, Tanana-Kuskokwim Lowlands, Yukon-Tanana Uplands, Ray Mountains, Chugach-St. Elias Mountains, and Alaska Range Subregions	Mixed and coniferous woodlands, talus slopes, ridges, rock outcrops, burns, clearings, fields, banks, snowbeds
Pacific buttercup (<i>Ranunculus pacificus</i>)	Sensitive	Perennial herb, stems erect or reclining	Subarctic Tundra and Coast Mountains Boreal Ecoregions; and Gulf of Alaska Coast, Chugach-St. Elias Mountains, Cook Inlet Basin, Alaska Range, Bristol Bay Lowlands, and Yukon-Kuskokwim Delta Subregions	Along streams and in meadows
Parry sedge (<i>Carex parryana</i>)	Sensitive	Perennial sedge, loosely cespitose	Coast Mountains Boreal Ecoregion; and Alaska Range and Chugach-St. Elias Mountains Subregions	Alkaline meadows, lake margins, roadsides, ditches

TABLE P-1 (cont'd)				
Bureau of Land Management (BLM) Sensitive and Watch List Species Associated with the Mainline Facilities				
Species ^a	BLM Status	Description	Alaska Region ^b	Habitat
Peck's sedge (<i>Carex peckii</i>)	Watch List	Perennial sedge, loosely cespitose	Beringia Boreal Ecoregion; Tanana-Kuskokwim Lowlands, Yukon-Tanana Uplands, Ray Mountains and Alaska Range Subregions	Dry to mesic slopes, deciduous or mixed deciduous-coniferous, open woods, bases of slopes, exposed outcrops
<i>Poa sublanata</i>	Sensitive	Perennial grass	Arctic Tundra Ecoregion; and Beaufort Coastal Plain and Brooks Foothills Subregions	Arctic mesic tundra, tops and sides of semi-stable low sand dunes
Porsild's bluegrass (<i>Poa porsildii</i>)	Sensitive	Perennial grass, dioecious, densely to loosely tufted, often forming large tussocks	Beringia Boreal Ecoregion; and Davidson Mountains, Yukon-Old Crow Basin, and Yukon-Tanana Uplands Subregions	Alpine slopes, alpine ridges, subalpine slopes, seepage slopes, rock outcrops
Porsild's saxifrage (<i>Micranthes porsildiana</i> / <i>M. nelsoniana</i> var. <i>porsildiana</i>)	Sensitive	Perennial herb from thin rhizome	Beringia Boreal, Coast Mountains Boreal, and Subarctic Tundra Ecoregions; and Yukon-Tanana Uplands, Alaska Range, Tanana-Kuskokwim Lowlands, Wrangell Mountains, Gulf of Alaska Coast, and Ahklun Mountains Subregions	Rock outcrops, alpine slopes, alpine ridges, rocky seeps, stream banks
<i>Puccinellia banksiensis</i>	Sensitive	Perennial grass	Arctic Tundra Ecoregion and Beaufort Coastal Plain Subregion	Frost-heaved turfy tundra
Pygmy aster (<i>Symphyotrichum pygmaeum</i>)	Sensitive	Perennial herb from branched caudex and long rhizomes	Arctic Tundra Ecoregion; and Beaufort Coastal Plain and Brooks Range Foothills Subregions	River terraces, river banks, dunes, pingos
<i>Ranunculus turneri</i> ssp. <i>turneri</i>	Sensitive	Perennial herb from branching fibrous roots	Arctic Tundra and Beringia Boreal Ecoregions; and Yukon-Old Crow Basin, Yukon-Tanana Uplands, Ray Mountains, and Brooks Foothills Subregions	Stream banks, stream terraces, subalpine slopes, seepage slopes, late-melting snowbeds
Vahl's alkaligrass (<i>Puccinellia vahliana</i>)	Watch List	Perennial, tufted grass, not mat-forming, from thick curled roots	Arctic Tundra and Coast Mountains Boreal Ecoregions; Beaufort Coastal Plain, Brooks Range, Kotzebue Sound Lowlands, Alaska Range, and Kluane Ranges Subregions	Alpine slopes, alpine ridges, frost-boils, high-center polygons, pingos, beaches, fens, pond edges, stream banks in dune areas
Wedgeleaf saxifrage (<i>Saxifraga adscendens</i> ssp. <i>oregonensis</i>)	Watch List	Perennial herb, solitary or tufted, not stoloniferous, with caudex	Coast Mountains Boreal and Subarctic Tundra Ecoregions; Ahklun Mountains, Alaska Range and Yukon-Tanana Uplands Subregions	Cliff ledges, scree, talus slopes, gravelly stream banks, gravelly alpine meadows
Windmill fringed gentian (<i>Gentianopsis barbata</i> ssp. <i>barbata</i>)	Watch List	Annual forb/herb	Beringia Boreal Ecoregion	Arctic shrub, non-marine

TABLE P-1 (cont'd)

Bureau of Land Management (BLM) Sensitive and Watch List Species Associated with the Mainline Facilities

Species ^a	BLM Status	Description	Alaska Region ^b	Habitat
Wood's rose (<i>Rosa woodsia</i> ssp. <i>woodsia</i>)	Watch List	Perennial shrub from rhizome	Beringia Boreal Ecoregion; Yukon-Tanana Uplands, Tanana-Kuskokwim Lowlands, and Alaska Range Subregions	Prairies, plains, riparian and woodland areas
Yenisei River pondweed (<i>Potamogeton subsibiricus</i>)	Watch List	Perennial herb	Coast Mountains Boreal Ecoregion	Shallow water of ponds and lakes
Yukon aster (<i>Symphyotrichum yukonense</i>)	Sensitive	Perennial herb, tufts or colonies	Brooks Range and Kobuk Ridges and Valleys Subregions	River bars, terraces, floodplains, sand blowouts, dunes; sand, silt gravel
Sources: Alaska Department of Fish and Game (ADF&G), 2015a, 2018h, n.d.(c); Alaska Center for Conservation Science (ACCS), 2016a,b; Alaska Migratory Bird Co-management Council (AMBCC), 2017; Boggs et al., 2016a; Bureau of Land Management (BLM), 2019; Cornell, 2015; Dokuchaev, 1997; eFloras, n.d.; Lotts and Naberhaus, 2017; National Audubon, 2017b; NatureServe, 2018b; Intermountain Region Herbarium Network (IRHN), n.d.; International Union for Conservation of Nature's Red List (IUCN), 2019; Randolph and McCafferty, 2005; Schumacher et al., 1989; U.S. Department of Agriculture (USDA), 2018, 2019b; Walton et al., 2013; Williams et al., 2016; Xerces Society, 2019				
^a	Federally listed species associated with the Project are the Alaska-breeding Steller's eider, spectacled eider, northern sea otter, polar bear, and wood bison. The Eskimo curlew is a federally listed species and a BLM sensitive species, but is presumed extinct. These species are addressed in section 4.8.1 of the environmental impact statement (EIS). All bird species are also protected under the Migratory Bird Treaty Act.			
^b	Ecoregions and subregions are based on the Unified Ecoregions of Alaska classification system delineated by Nowacki et al. (2001b), as described by the ADF&G (2015a) and identified in section 4.0 (see table 4-1 and figure 4-1) of the EIS.			
^c	Species is listed as subsistence migratory bird species.			
^d	Species is also protected under the Bald and Golden Eagle Protection Act.			
^e	Species is listed as previous candidate species under the Endangered Species Act.			
^f	The 2010 BLM list had the Osgood's arctic ground squirrel (<i>Spermophilus parryii osgoodi</i>) listed as Sensitive. Due to uncertain subspecies taxonomy and range differentiation, the entire species has been moved to the Watch List and will be reviewed as more information is available.			
^g	Any of the 374 Alaska endemic invertebrates when found on BLM-managed lands are considered Watch List species (BLM, 2019a).			
^h	Waterbodies with known populations of Pacific salmonids (e.g., Chinook and chum salmon) are listed in appendix I of the EIS.			

TABLE P-2

Alaska Species of Greatest Conservation Need

Alaska State Species	Ranking ^a	Subregion	Habitat	Project Facility Association	Potential Project Impacts
Birds					
Arctic loon (<i>Gavia arctica</i>)	S1	Brooks Foothills; Kobuk Ridges and Valleys	Breeds in small brackish lakes and forages on freshwater lakes adjacent to wet sedge meadows up to 800 meters inland.	Marine vessel routes	Collisions, Spills
Black guillemot (<i>Cepphus grille</i>)	S2	Beaufort Coastal Plain	In the western Arctic and adjacent Pacific Oceans, black guillemots breed on coastlines and islands of the eastern Siberian, western Chukchi, and Beaufort Seas. In northern Alaska, they are an uncommon, local breeder from Seahorse Island and Point Barrow east to Igalik Island and a rare breeder farther east to Barter Island. In western Alaska, they are an uncommon breeder at Cape Thompson and a regular summer visitor to St. Lawrence Island. In winter, this species spends most of its time on the open ocean near its breeding areas. However, in areas where open water is limited by sea ice, the birds retreat until reaching ice-free coastal areas or mobile pack ice with open water and accessible foraging habitat. Black guillemots are an ice-dependent (pagophilic) species. Their survival is tied to the Arctic pack ice.	Marine vessel routes	Collisions, Spills
Black oystercatcher (<i>Haematopus bachmani</i>)	S2	Cook Inlet Basin	Habitat features include mixed sand/cobble and gravel beaches, exposed rocky headlands, rocky islets, and tidewater glacial moraines. Breeding territories are associated with dense mussel beds. This species avoids brushy and forested habitats. Winter habitat includes protected, ice-free tidal flats with dense mussel beds.	Marine vessel routes	Collisions, Spills
Buff-breasted sandpiper ^b (<i>Calidris subruficollis</i>)	S2	Beaufort Coastal Plain; Brooks Range; Brooks Foothills	Inhabits boreal forests, mixed forests, muskeg bogs, birches, and streamside willows, including young and mature spruce and sometimes balsam fir (<i>Abies balsamea</i>). In northern Alaska, occurs in a variety of forests, including spruce, mixed spruce, alder, and willow.	Gas Treatment Facilities; Mainline Facilities	Habitat loss and/or alteration; Noise and Lighting
Dovekie (<i>Alle alle</i>)	S1	Bering Sea Islands	Nests among talus slopes, scree, and rubble in rock crevice, cliff rubble, or in a burrow at the foot of cliffs or coastal mountains or on rocky outcrops surrounded by glaciers. Prefers areas of early snowmelt, sheltered from high winds. Nests usually on coast but locally inland in some areas.	Marine vessel routes	Collisions, Spills
Hudsonian godwit ^b (<i>Limosa haemastica</i>)	S2	Ray Mountains; Kobuk Ridges and Valleys; Cook Inlet Basin	Breeding habitat includes sedge-grass marshes, wet tundra, and taiga bogs. Nesting habitat open sedge meadows intermixed with forest within Alaska. Cook Inlet habitat muskeg with wet bog, shallow pools, spruce islands, and drier upland areas surrounded by conifer forests. Similar in western Alaska where species breeds in spruce or spruce-deciduous forests interspersed with open bogs or wet meadows.	Mainline Facilities; Liquefaction Facilities	Habitat loss and/or alteration; Noise and Lighting

TABLE P-2 (cont'd)					
Alaska Species of Greatest Conservation Need					
Alaska State Species	Ranking ^a	Subregion	Habitat	Project Facility Association	Potential Project Impacts
Kittlitz's murrelet (<i>Brachyramphus brevirostris</i>)	S2	Cook Inlet Basin	Nests on coastal cliffs, and barren ground, rock ledges, and talus above timberline in coastal mountains, generally near glaciers. Nests generally on ground on barren scree slopes, short distance below peak or ridge. Breeding generally occurs in high elevation alpine areas, with little or no vegetative cover.	Marine vessel routes	Collisions, Spills
Peale's peregrine falcon (<i>Falco peregrinus pealei</i>)	S2	Cook Inlet Basin	Coastal beaches, tidal flats, reefs, islands, marshes, estuaries, and lagoons. Nests mostly found on ledges of vertical rocky cliffs near seabird colonies; some nests on grassy benches of rocky bluffs.	Mainline Facilities; Liquefaction Facilities	Noise and Lighting
Pink-footed shearwater (<i>Puffinus creatopus</i>)	S1/S2N	Alaska Range; Cook Inlet Basin	Rare summer visitor to south-central and southeast Alaska. Prefers marine waters at edge of continental shelf.	Marine vessel routes	Collisions, Spills
Ring-necked duck (<i>Aythya collaris</i>)	S2	Tanana-Kuskokwim Lowlands; Alaska Range; Cook Inlet Basin	Breeds in freshwater marshes and bogs across the boreal forest of northern North America. Diving ducks, frequently seen in quite shallow waters where patches of open water are fringed with aquatic or emergent vegetation. On migration, ring-necked ducks stop to rest and feed on shallow lakes and impoundments with dense stands of cattails, bulrushes, and other emergent vegetation. Form very large flocks on some lakes. During the winter, frequent swamps, river floodplains, brackish portions of estuaries, shallow inland lakes, sloughs, marshes, reservoirs, and other managed freshwater impoundments	Mainline Facilities; Liquefaction Facilities	Habitat loss and/or alteration; Noise and Lighting
Sanderling (<i>Calidris alba</i>)	S2	Cook Inlet Basin	Nests on dry tundra, in stony locations often devoid of vegetation, but within a few hundred meters of wet tundra. Nonbreeding habitat includes sandy beaches, occasionally mud flats, shores of lakes and rivers, and exposed reefs.	Marine vessel routes	Collisions, Spills
Short-tailed albatross ^d (<i>Phoebastria albatrus</i>)	S1	Aleutian Islands	When the short-tailed albatross is not nesting, it is widespread throughout the temperate and subarctic regions of the North Pacific. The population ranges from Japan east to the Bering Sea and Gulf of Alaska and south to California. The birds are typically found near islands and mainland coastlines as opposed to mid-ocean regions. This species spends a vast majority of its time soaring over the ocean, only coming to land to nest.	Marine vessel routes	Collisions, Spills
Slaty-backed gull (<i>Larus schistisagus</i>)	S2	Aleutian Islands; Bering Sea Islands	In Alaska, this species is a rare spring migrant and summer and fall visitor along the Bering and Chukchi Seas. The first confirmed breeding record for Alaska and North America was from Anikun Island, which is a low, sandy, barrier island about 2 miles south-southwest of Cape Romanzof in the Bering Sea. This area is part of the Yukon Delta National Wildlife Refuge.	Marine vessel routes	Collisions, Spills

TABLE P-2 (cont'd)

Alaska Species of Greatest Conservation Need

Alaska State Species	Ranking ^a	Subregion	Habitat	Project Facility Association	Potential Project Impacts
Spectacled eider ^c (<i>Somateria fischeri</i>)	S2	Beaufort Coastal Plain; Brooks Range; Brooks Foothills	Breeding range in western Alaska consists of coastal salt marshes that grade into thousands of wetlands and lakes. Nesting habitat includes sedges, grasses with higher areas containing shrubs. Islands in river deltas and wetlands characterize habitat on the North Slope. Molting in near shore waters containing an abundance of mollusks. Winter habitat includes open sea or sea pack ice with polynyas.	Gas Treatment Facilities; Marine vessel routes; Mainline Facilities	Habitat loss and/or alteration; Noise and Lighting; Collisions, Spills, Human disturbance
Steller's eider (Alaska-breeding) ^c (<i>Polysticta stelleri</i>)	S1	Beaufort Coastal Plain; Cook Inlet Basin	Nests on grassy edges of tundra lakes and ponds, or within drained lake basins. Occasionally nests on barren rocky tundra, ridges, islands, or peninsulas. Nests in dry moss or in depressions between grassy hummocks. Nonbreeding habitat includes shallow marine waters around bays, reefs, lagoons, and inlets or far offshore.	Gas Treatment Facilities; Mainline Facilities; Liquefaction Facilities	Habitat loss and/or alteration; Noise and Lighting; Collisions, Spills, Human disturbance
Surfbird (<i>Aphriza vigata</i>)	S2	Kobuk Ridges and Valleys; Ray Mountains; Kobuk Ridges and Valleys; Yukon-Tanana Uplands; Alaska Range; Cook Inlet Basin	Breeds in alpine tundra along mountain ridges in interior mountains. Nesting habitat includes dry frequently stony alpine tundra with lichens, dwarf shrubs, scree or rock fields. Mostly, occupies habitat on summits and upper slopes of steep ridges. Also, may breed near coastal areas. Nests in rocky areas with clumps of vegetation.	Mainline Facilities; Liquefaction Facilities	Habitat loss and/or alteration; Noise and Lighting; Human disturbance
Swainson's hawk (<i>Buteo swainsoni</i>)	S2	Beaufort Coastal Plain; Brooks Range; Brooks Foothills; Ray Mountains; Alaska Range	Forages in open grass dominated habitat, sparse shrublands, and small open woodlands. Has adapted to agricultural areas with crops that do not exceed the height of native vegetation. Nests in scattered trees within foraging areas. In B.C., nests sites are typically in foothill and valley uplands areas, and in the Yukon, sightings have been near riverside cliffs with close access to open tundra.	Mainline Facilities	Habitat loss and/or alteration; Noise and Lighting; Human disturbance
Tule white-fronted goose (<i>Anser albifrons elgasi</i>)	S1	Alaska Range; Cook Inlet Basin	In Cook Inlet, nests along sloughs dominated by saline sedge-grass habitat and freshwater marsh/shrub bog.	Mainline Facilities	Habitat loss and/or alteration; Noise and Lighting; Human disturbance
Western screech owl (<i>Megascops kennicottii</i>)	S2	Alaska Range; Cook Inlet Basin	Diverse habitat requirements. Associated with riparian habitats and deciduous trees. Pacific Coast, including Alaska, found in mixed forests of bigleaf maple (<i>Acer macrophyllum</i>), Douglas fir (<i>Pseudotsuga menziesii</i>), red alder (<i>Alnus rubra</i>), western hemlock (<i>Tsuga heterophylla</i>), and western red cedar (<i>Thuja plicata</i>). Nests in tree cavities excavated by either northern flickers or woodpeckers, natural cavities, or nest boxes. Nests near water. In Yakutat, favors riparian spruce.	Mainline Facilities; Liquefaction Facilities	Habitat loss and/or alteration; Noise and Lighting; Human disturbance

TABLE P-2 (cont'd)

Alaska Species of Greatest Conservation Need

Alaska State Species	Ranking ^a	Subregion	Habitat	Project Facility Association	Potential Project Impacts
Yellow-billed loon ^e (<i>Gavia adamsii</i>)	S2	Beaufort Coastal Plain; Brooks Range; Brooks Foothills	Nests in low-lying treeless tundra regions, usually coastal in Alaska, clear, low-rimmed lakes. Breeding sites may also be on inland lakes or large river deltas with untapped lakes. Requires nesting and brood-rearing lakes. Nests placed at the water's edge, typically in a low, gently sloping area. Deep open water with islands is a preferred habitat for nesting relative to its availability. Most nests are placed on the leeward lake or island shore.	Gas Treatment Facilities; Marine vessel routes; Mainline Facilities	Habitat loss and/or alteration; Noise and Lighting; Human disturbance
Mammals					
Beluga whale, Cook Inlet ^{d, g} (<i>Delphinapterus leucas</i>)	S1	N/A	Cook Inlet, inhabits fjords, estuaries, and shallow waters. ^f	Marine vessel routes; Liquefaction Facilities; Mainline Facilities	Collisions; Spills; Habitat loss; Noise
Blue whale ^{d, g} (<i>Balaenoptera musculus</i>)	S2	N/A	Blue whales move poleward in spring to exploit the high seasonal zooplankton production found in high-latitude waters during summer. In the fall, blue whales move toward the subtropics, where warmer waters reduce energy expenditures while fasting, provide favorable conditions for reproduction, and eliminate the risk of ice entrapment. Whales of the Western North Pacific stock feed in the Gulf of Alaska, south of the Aleutians and south of Kamchatka, and winter in the western and central Pacific. ^f	Marine vessel routes	Collisions; Spills
North Pacific right whale ^{d, g} (<i>Eubalaena japonica</i>)	S1	N/A	Northern right whales were distributed throughout the western Pacific, Gulf of Alaska, and southeastern Bering Sea. Current known distribution is limited to a few animals on the Bering Sea shelf and an occasional sighting elsewhere in the North Pacific. Consistent sightings have been in the southeastern Bering Sea during July and August. ^f	Marine vessel routes	Collisions; Spills; Noise
Northern fur seal ^g (<i>Callorhinus ursinus</i>)	S2	Aleutian Islands	The only northern fur seal breeding beaches in the United States are on the Bogoslof Island in the Aleutians and in the Pribilof Islands. ^f	Gas Treatment Facilities; Marine vessel routes	Collisions; Spills
Northern sea otter ^{c, g} Southwest Alaska DPS (<i>Enhydra lutris kenyoni</i>)	S2/S3	Aleutian Islands; Cook Inlet	Coastal marine waters	Vessel Traffic (Cook Inlet, Bering Sea, Gulf of Alaska)	Collisions; Spills; Noise
Polar bear ^{c, g} (<i>Ursus maritimus</i>)	S2	Beaufort Coastal Plain	Coastal (terrestrial), and nearshore marine waters.	Gas Treatment Facilities, Mainline Pipeline, Vessel Traffic (Beaufort Sea)	Habitat loss and/or alteration; Noise; Collisions

TABLE P-2 (cont'd)					
Alaska Species of Greatest Conservation Need					
Alaska State Species	Ranking ^a	Subregion	Habitat	Project Facility Association	Potential Project Impacts
Sources: Alaska Center for Conservation Science (ACCS), 2016b; Alaska Department of Fish and Game, 2015a; Earnst, 2004; Gotthardt et al., 2012, 2013; NatureServe, 2018b; Nowacki et al., 2001b N/A = Not applicable ^a Alaska species occurring within the Project footprint are based on range and habitat information from the Alaska Natural Heritage Program (ACCS, 2017b). NatureServe state rankings include: S1 = Critically imperiled within the state; at very high risk of extirpation because of very few occurrences; declining populations, or extremely limited range and/or habitat; S2 = Imperiled within the state: at high risk of extirpation because of few occurrences, declining populations, limited range, and/or habitat; and S3 = Vulnerable. ^b Bureau of Land Management special status species ^c Federally protected (threatened) species ^d Federally protected (endangered) species ^e Species is listed as previous candidate species under the Endangered Species Act. ^f Species description and occurrences in the Project area are discussed in section 4.6.3 of the EIS. ^g Protected under the Marine Mammal Protection Act.					