

## 5. BIOLOGICAL RESOURCES

This chapter describes the existing environment for biological resources and potential impacts to those resources from proposed Port MacKenzie Rail Extension construction and operations. The analysis focuses on four primary biological resources – vegetation, wildlife, fisheries, and threatened and endangered species – because of their importance in providing habitat (vegetation cover), human use (wildlife and fisheries), and regulatory compliance (threatened and endangered species). During consultations with Federal and State of Alaska resource agencies, one federally protected endangered animal species and depleted stock – the Cook Inlet beluga whale – was identified and no state-protected species were identified as occurring in the area the proposed rail line could affect (see Appendix A). On related topics, Section 4.4 addresses impacts to wetlands, and Chapter 7 addresses subsistence uses of biological resources.

The proposed Port MacKenzie Rail Extension would be in the Cook Inlet basin, bordered on the northeast and west by the Alaska Range and on the east by the Chugach-St. Elias Mountains. The level rolling topography, defined by glacial moraines, drumlin fields, eskers, and outwash plains, supports diverse vegetation communities dominated by spruce and hardwood forests. Uplands support mixed forests of white spruce, quaking aspen, and paper birch; tall scrub communities develop in floodplains; and lowlands support black spruce and acidic shrub bogs. Wildland fire incidence varies from low to moderate. The Susitna and Matanuska rivers drain glaciers in the surrounding mountains and, along with their tributaries, support salmon and other freshwater fishes. Beluga whales and harbor seals occur throughout the Cook Inlet and in the Knik Arm of the Cook Inlet. Wetland and upland habitats support moose, bears, and a variety of small mammals. Numerous lakes, swamps, bogs, and estuaries attract large numbers of shorebirds and waterbirds, while extensive forests support many landbirds.

Appendices D, E, and F provide more detailed descriptions of the regional and site-specific conditions for vegetation, wildlife, and fisheries resources. These appendices form the basis for the impact assessment, further describe analytical methods, and provide detailed results of qualitative and quantitative impact assessment for the proposed rail segments and alternatives. The impact assessments are based on spatial analyses, field surveys, and literature reviews. Appendix G provides the results of the Essential Fish Habitat Assessment in compliance with the Magnuson-Stevens Fishery Management and Conservation Act. Appendix H provides the results of the Biological Assessment for the Cook Inlet beluga whale in compliance with the Endangered Species Act.

### 5.1 Regulatory Setting

Rail line construction and operations activities that have a potential to affect vegetation, fisheries, wildlife, and endangered species or their habitats are regulated by various Federal and state agencies. Table 5.1-1 lists and describes specific laws and regulations that protect biological resources and apply to the proposed rail line. These Federal and State of Alaska regulations and associated requirements provide the framework for agencies to review Port MacKenzie Rail Extension design, construction, and operations to ensure avoidance, minimization, or mitigation of impacts to biological resources in the project area.

**Table 5.1-1  
Applicable Federal and State Laws and Regulations (page 1 of 2)**

<b>Permit/Activity/Regulation</b>	<b>Authority<sup>a</sup></b>	<b>Description</b>
<b>FEDERAL</b>		
<b>National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS)</b>		
Essential Fish Habitat Consultation	Magnuson-Stevens Fishery Management and Conservation Act (16 U.S.C. 1801-1883)	Provides for the management of fish and other species in designated Exclusive Economic Zones.
Fish and Wildlife Coordination Act Consultation	Fish and Wildlife Coordination Act (16 U.S.C. 661 <i>et seq.</i> )	Requires evaluation of the impacts to fish and wildlife and development of mitigation for proposed development projects, including involvement of the National Marine Fisheries Service and state fish and wildlife management agencies.
Endangered Species Act Consultation	Endangered Species Act (16 U.S.C. 1531 <i>et seq.</i> )	Provides for the protection of federally managed fisheries and marine mammals that have been identified as in danger of becoming extinct including habitats that have been identified as critical to their survival.
Marine Mammal Protection Act Consultation	Marine Mammal Protection Act as amended (16 U.S.C. 1361 <i>et seq.</i> )	Provides for protection of marine mammals and regulates the incidental take of marine mammals for specified otherwise legal activities.
<b>U. S. Fish and Wildlife Service</b>		
Bald and Golden Eagle Protection Act Clearance	Bald and Golden Eagle Protection Act (16 U.S.C. 668)	Provides for the protection of bald and golden eagles, their nests, or their eggs from harm or disturbance.
Migratory Bird Protection Act Consultation	Migratory Bird Treaty Act (16 U.S.C. 703)	Provides for protection of birds that migrate between the United States and Canada, Mexico, Japan, or Russia.
Fish and Wildlife Coordination Act Consultation	Fish and Wildlife Coordination Act (16 U.S.C. 661 <i>et seq.</i> )	Requires evaluation of the impacts to fish and wildlife and development of mitigation for proposed development projects, including involvement of the U.S. Fish and Wildlife Service and state fish and wildlife management agencies.
Endangered Species Act Consultation	Endangered Species Act (16 U.S.C. 1531)	Provides for the protection of wildlife, fish, and plants that have been identified as in danger of becoming extinct including habitats that have been identified as critical to their survival. There are no federally protected wildlife, fish, or plants or designated critical habitats within the jurisdiction of the Fish and Wildlife Service in the project area.
<b>STATE</b>		
<b>Alaska Department of Natural Resources</b>		
Alaska Forest Resources Practice Act Regulations	Division of Forestry, Alaska Resources and Practices Act, AS 41.17	The Division of Forestry manages state forests and provides technical advice to the Division of Lands on sound forest practices necessary to ensure the continuous growing and harvesting of commercial forest species on other state land. Regulates operations on private forest land and provides public information and assistance regarding forest practices and timber management.
Prohibited and Restricted Noxious Weeds Regulations	Division of Agriculture, 11 AAC 34.020	Provides for the regulation and identification of prohibited noxious weeds and establishes the maximum allowable tolerances for restricted noxious weeds.

**Table 5.1-1  
Applicable Federal and State Laws and Regulations (page 2 of 2)**

<b>Permit/Activity/Regulation</b>	<b>Authority<sup>a</sup></b>	<b>Description</b>
<b>STATE (continued)</b>		
<b>Alaska Department of Fish and Game</b>		
Fish Habitat (Title 16) Permit	Habitat Division, AS 16.05.841 or 16.05.871	Requires environmental review for any activity conducted within fish-bearing waters, such as proposed bridges, culverts, fords and crossings (both winter and summer); material sites; tailings facilities; and water-withdrawal structures.
Fish Passage Evaluation	Habitat Division, AS 16.05.841	Requires notification and authorization for activities within or across streams used by fish if such uses or activities could cause an impediment to passage of fish as determined by the Alaska Department of Fish and Game. Culvert installation; stream realignment or diversions; dams; low-water crossings; and construction, placement, deposition, or removal of any material or structure below mean high water line all require fish passage evaluation.
Anadromous Fish Evaluation	Habitat Division, AS 16.05.871	Requires notification and approval from fish habitat biologists "to construct a hydraulic project or use, divert, obstruct, pollute, or change the natural flow or bed" or "to use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed" of an anadromous waterbody. Includes all activities within or across streams and all instream activities including construction; road crossings; gravel removal; placer mining; water withdrawals; the use of vehicles or equipment in the waterway; stream realignment or diversion; bank stabilization; blasting; and the placement, excavation, deposition, disposal, or removal of any material potentially affecting an anadromous waterbody.
Conservation and Protection of Alaska Fish and Game Regulations	AS 16.20	Provides for the protection and preservation of Alaska natural habitat and game populations.
Fish Resources Permit	Division of Sport Fish and the Division of Commercial Fisheries (5 AAC 41)	Provides for the regulation of the transportation, possession, or release of live fish for scientific or educational purposes
Fish, Game, Aquatic Plant Resources Regulations	AS 16.05.020 (2)	Provides for the regulation of hunting and trapping and for the management of game populations in Alaska.
Endangered Species Take Permit	AS 16.20.195	Required for harvesting, injuring, importing, exporting, or capturing a state listed endangered species.
Regulation and Management of Game and Fish Resources	Title 16, Chapter 5	Provides for the regulation of hunting and management of game populations in Alaska. Provides for the regulation of fishing and management of fisheries in the state.
<sup>a</sup> AAC = Alaska Administrative Code; AS = Alaska Statute; U.S.C. = United States Code.		