

5.5 Threatened and Endangered Species

This section describes protected species in the proposed Port MacKenzie Rail Extension study area and potential impacts from the project on those species. Section 5.1 describes the regulatory setting for protected species, Section 5.5.1 defines the study area, Section 5.5.2 describes the analysis methodology, Section 5.5.3 summarizes the affected environment (existing conditions), and Section 5.5.4 summarizes potential environmental consequences (impacts) to protected species from the proposed rail line and Section 5.5.6 describes unavoidable environmental consequences of the proposed action to threatened and endangered species. Appendix H provides the BA of potential project-related impacts to Federal threatened and endangered species, as summarized in this section.

5.5.1 Study Area

The proposed rail line would be located within the Susitna River valley, northwest of Anchorage on the west side of the Knik Arm. The study area was determined after OEA consulted with the USFWS and NMFS on the presence and location of any threatened or endangered terrestrial or aquatic species and Critical Habitat in the project area that the proposed rail line could directly or indirectly affect. After the consultation process, OEA determined that the proposed project could indirectly affect the endangered Cook Inlet beluga whale (*Delphinapterus leucas*). Therefore, the study area for analysis of potential impacts to the Cook Inlet beluga whale is the proposed anadromous fish-bearing streams the proposed rail line would cross and the area around Port MacKenzie that could experience increased vessel traffic as a result of the rail line.

5.5.2 Analysis Methodology

OEA based the analysis of potential indirect impacts to Cook Inlet beluga whales from the proposed rail line construction and operation on rail line crossings of streams that support anadromous fish and on induced shipping traffic at Port MacKenzie. OEA based the analysis of potential instream anadromous fish habitat on the review of stream crossing characteristics in Section 4.2; anadromous fish species presence and habitat-use data (Johnson and Daigneault, 2008); fish habitat data collected at or near proposed stream crossings during OEA field investigations in 2008 (Noel *et al.*, 2008); and proposed stream-crossing structure type. OEA projected potential increases in shipping traffic at Port MacKenzie from information received from ARRC (ARRC, 2009). There is no available data for seasonal shipping; therefore, OEA assumed shipping to occur year-round with no seasonal variation.

5.5.3 Affected Environment

Beluga whales are small, white, toothed whales found in the Northern Hemisphere throughout Arctic and Subarctic waters and generally in shallow, coastal waters (NMFS, 2008). The NMFS designated the Cook Inlet beluga whale stock as depleted under the Marine Mammal Protection Act (65 *Federal Register* [FR] 34590 [May 31, 2000]) and as endangered under the Endangered Species Act (73 *FR* 62919 [October 22, 2008]). Beluga whales of Cook Inlet are a discrete isolated population that remain in Cook Inlet year round (Hobbs *et al.*, 2008; Hobbs and Sheldon, 2008). Cook Inlet beluga whales are concentrated in the upper inlet generally near

river deltas and bays in summer and fall, and they disperse offshore and move to mid inlet waters in winter (NMFS, 2008).

The NMFS (NMFS, 2008) defines 3 habitat types that stratify Cook Inlet into 3 regions based on patterns of beluga whale habitat use (Figure 5.5-1).¹ Type 1 habitat encompasses habitats with intensive beluga whale use from spring through fall; these are important foraging and nursery habitats. Type 1 habitat includes all of Cook Inlet northeast of a line drawn from 3 miles southwest of the Beluga River across to Point Possession. Type 2 habitat is based on less concentrated spring and summer beluga whale use and known fall and winter use areas. Type 2 habitat is south of Type 1 habitat and north of a line at 60.250 degrees north latitude. It also extends south along the west side of the inlet following the tidal flats into Kamishak Bay around to Douglas Reef, and includes an isolated section in Kachemak Bay. Type 3 habitat encompasses the remaining portions of the beluga whale range in Cook Inlet; the southern boundary is an opening into the Gulf of Alaska approximately 53 miles across from Cape Douglas to Elizabeth Island. Type 1 habitat, in which Port MacKenzie is located, is believed to be the most valuable of the 3 habitat types based on frequency of use and its importance as feeding and calving habitats.

Lakes, rivers, and perennial and intermittent streams along the proposed rail line alternatives provide habitat for fish either throughout or during portions of the year. Study area waters can support spawning, foraging, rearing, refuge, and/or migratory use by anadromous fish, which is important as forage for beluga whales. Notable fish-bearing waters in this area that the project could affect include the Little Susitna River, Fish Creek, Willow Creek, Rogers Creek, Lake Creek, Goose Creek, Lucile Creek, Little Meadow Creek, and several unnamed tributary streams. Anadromous fish species commonly present in the study area include all 5 Pacific salmon – Chinook (king), chum (dog), coho (silver), pink (humpy), and sockeye (red) – and eulachon (hooligan) and Dolly Varden (Johnson and Daigneault, 2008).

The abundance of beluga whales in Cook Inlet decreased between 1994 and 1998, likely due to Native subsistence hunts (Hobbs *et al.*, 2008). From 1993 to 2007, most beluga whale sightings were concentrated north and east of the Beluga River and Point Possession (Hobbs *et al.*, 2008). Beluga whales have remained in the area that previously had the highest impact from hunting (on the north end of Cook Inlet, near Anchorage), and they have disappeared from peripheral habitats (in the southern end of the inlet). It is not known if the current contracted distribution is a result of changing habitat, predator avoidance, or a shift of a reduced population into preferred habitat areas (Hobbs *et al.*, 2008). In winter, beluga whales are more dispersed throughout Cook Inlet (Moore *et al.*, 2000). During the June and July abundance estimate surveys, the proportion of

¹ After OEA submitted a BA for the Cook Inlet beluga whale (see Appendix H of this Final EIS) to the NMFS for review and concurrence or recommendations, the NMFS published a proposed designation of Critical Habitat for the Cook Inlet beluga whale on December 2, 2009 (74 *FR* 63080). The NMFS sought public comments until March 3, 2010 on the proposed rule and a Comment Analysis Report was published in May 2010. The proposed Critical Habitat consists of Type 1 and Type 2 habitats.

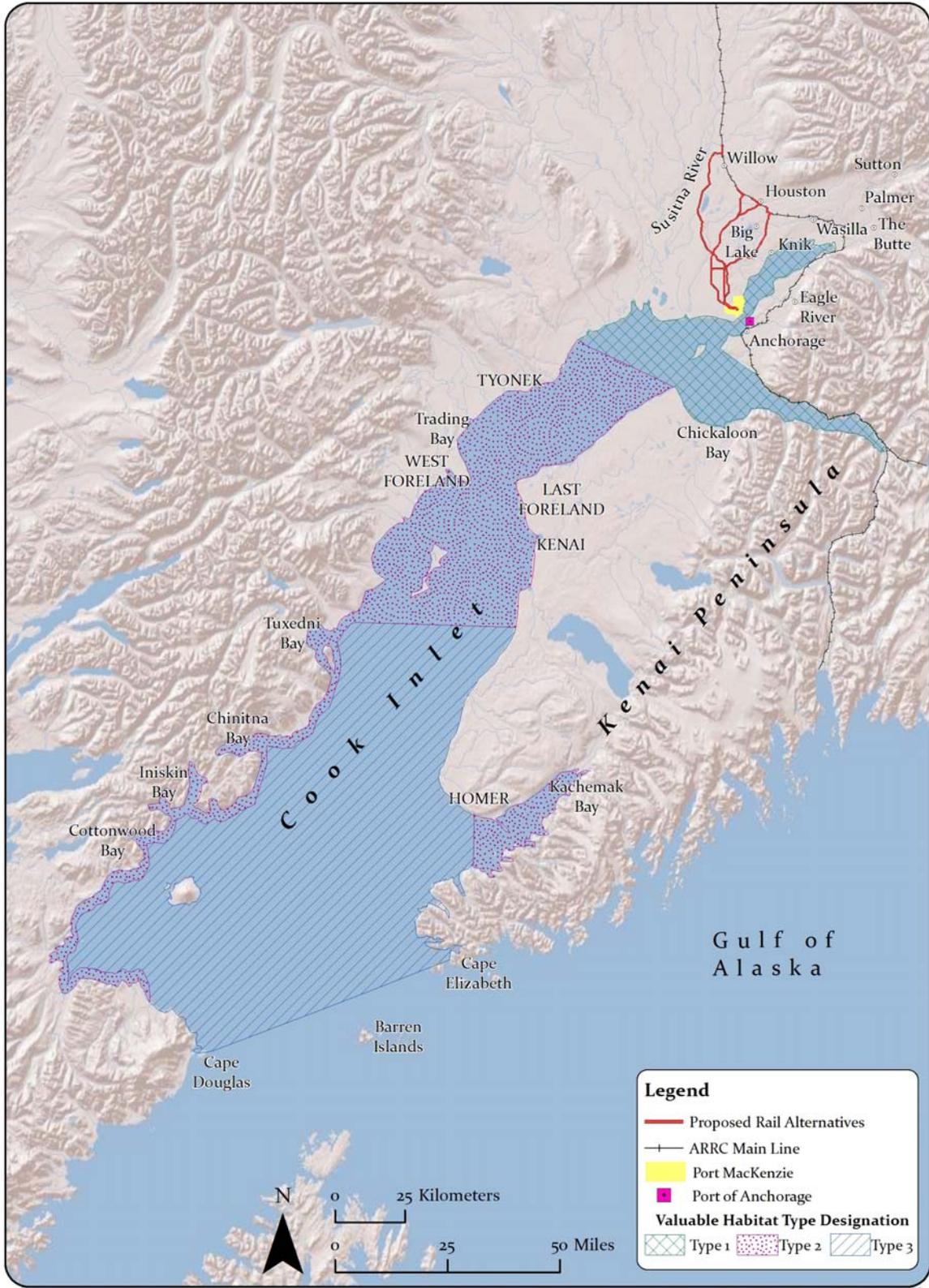


Figure 5.5-1. Habitat Areas (Types 1, 2, and 3) Identified for Cook Inlet Beluga Whales (NMFS, 2008)

beluga whales using the Knik Arm has fluctuated between 0 to a little more than 62 percent of the observed individuals (see Appendix H).

5.5.4 Environmental Consequences

There would be no direct impacts to beluga whales from proposed rail line construction because there would be no construction activities in waters of the Cook Inlet. As described in this section, OEA identified 2 potential indirect effects to beluga whales from proposed rail line operation – (1) impacts to forage fish resources for the beluga whale due to potential rail line stream crossings and (2) impacts to beluga whale presence in Port MacKenzie due to increased noise and disturbance from increased ship traffic. Depending on the alternative, the proposed 31- to 46-mile rail line would cross from 5 to 9 streams that support anadromous salmon populations in the Willow Creek and Fish Creek – Susitna River drainages; the Little Susitna River drainage; Lucile Creek, Fish Creek, and Goose Creek – Knik Arm drainages; and several other small Cook Inlet drainages. Loss or alteration of instream and riparian habitats would result in reduced capacity of the habitats to produce anadromous fish. Blockage of fish movement could further limit available fish habitat, also resulting in reduced capacity of the habitat to produce anadromous fish. Because beluga whales compete with both commercial and recreational fisheries for available anadromous fisheries resources, and because the configuration of the Susitna River mouth appears to be critical to beluga whale feeding efficiency (NMFS, 2008), small changes in available anadromous fish resources within Type 1 habitats of the upper Cook Inlet could have a disproportionate effect on beluga whales.

Rail line operation, including delivery of bulk materials to and from Port MacKenzie, could increase total vessel traffic at Port MacKenzie from an average of 50 ships per year from 2005 to 2008, to as many as 55 to 68 ships per year (ARRC, 2009). The increase of 5 ships per year is based on ARRC's estimate of 5 ships being diverted from the Port of Seward to Port MacKenzie. This is derived from assuming an average of two 60-car trains daily for 4 weeks prior to a vessel call at Port Mackenzie (to stockpile material for the vessel) over the course of 20 weeks, which would equate to 5 vessels (20 weeks ÷ 4 weeks per vessel call = 5 vessels). The increase of up to 13 ships per year is based on the same calculation, but assumes a full year of operation (52 weeks). Over the course of 52 weeks, with 4 weeks needed to stockpile material for each vessel call, there could be potentially 13 vessels per year from the operation of the proposed rail line (52 weeks ÷ 4 weeks per vessel call = 13 vessels). For comparison purposes, the number of vessel calls per year at the Port of Anchorage between 2002 and 2008 totaled 227, 313, 224, 244, 178, 184, and 161 (DOT, 2009).

Increased vessel traffic would add to noise and disturbance in the immediate vicinity of Port MacKenzie. Added noise and disturbances could displace beluga whales from the Port MacKenzie area. However, ships used to transport materials delivered to and from Port MacKenzie by the proposed rail line would not produce noise in excess of 180 dB re: 1 µPa, which is defined as Level A harassment of marine mammals. While large ships generate some broadband noise, the majority of this sound energy would fall below the hearing range of beluga whales and is not expected to elicit behavioral reaction (NMFS, 2009). Large vessel frequencies are outside the range of beluga whale hearing and vocal communications, and sound pressures would attenuate within short distances from the source to levels well below the Level B harassment threshold of 160 dB re: µPa.

With implementation of OEA's recommended impact avoidance and minimization measures at anadromous stream crossings and for ship traffic servicing Port MacKenzie, OEA has determined that proposed project may affect, but is not likely to adversely affect, the Cook Inlet beluga whale (see Appendix H). The NMFS concurred with OEA's findings on March 9, 2010 (Appendix A).

5.5.5 No-Action Alternative

Under the No-Action Alternative, ARRC would not construct and operate the proposed Port MacKenzie Rail Extension, and there would be no impacts to threatened and endangered species from the project.

5.5.6 Unavoidable Environmental Consequences of the Proposed Action

To avoid or minimize potential impacts to the Cook Inlet beluga whale from the proposed rail line described above in Section 5.5.4, OEA is recommending that the Board impose mitigation measures to protect anadromous fisheries (see sections 19.2 and 19.3). Notwithstanding implementation of OEA's recommended impact avoidance and minimization measures at anadromous stream crossings and for ship traffic servicing Port MacKenzie, OEA determined that the Port MacKenzie Rail Extension Project may affect, but is not likely to adversely affect, the Cook Inlet beluga whale (Appendix H). The NMFS concurred with OEA's findings on March 9, 2010 (Appendix A). OEA's analysis indicates that though some unavoidable impacts to fisheries resources can be anticipated (see section 5.4.4.1), these impacts are considered unlikely to adversely affect the Cook Inlet beluga whale.