



**UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

February 3, 2009

Colonel Kevin J. Wilson
District Engineer
U.S. Army Corps of Engineers
P.O. Box 898
Anchorage, AK 99506-0898

Re: Knik Arm Ferry
POA-2006-1250

Attention: Leslie Tose

Dear Colonel Wilson:

The National Marine Fisheries Service (NMFS) has reviewed the above referenced Public Notice based on the application of the Matanuska-Susitna (Mat-Su) Borough. The proposed project purpose is to provide a ferry landing on the Anchorage side of upper Cook Inlet to serve the commuter ferry system between Port MacKenzie and Ship Creek. The proposed project site (the Ship Creek Point-South Alternative) is located in Knik Arm, on the south bank of Ship Creek, extending off the south side of the Small Boat Launch. The project would construct a pile-supported trestle, a transfer bridge, and floating dock with multiple vessel berths. Together, the ferry landing structures would require the installation of 136 pilings (sheet 10 of 10 in the application packet), of which 128 are steel piles measuring 3-feet in diameter.

At the last project meeting on October 1, 2008, the applicant provided documentation supporting their proposal to locate the ferry landing at Ship Creek Point-South and rationale for why they could not locate the ferry landing north of Ship Creek at the Port of Anchorage. In letters dated April 30, 2003, October 27, 2006, November 9, 2006, and May 14, 2007, NMFS has consistently supported the ferry landing development on the north side of Ship Creek (North Star alternative) because it has the smallest effect on Essential Fish Habitat (EFH) and Cook Inlet beluga whales. Most of the estuary for Ship Creek has been lost to industrial development. The North Star alternative would maintain industrial activities in the north side of Ship Creek, facilitating recreational activities on the south side of Ship Creek and future habitat restoration efforts in the Ship Creek Estuary.

Conservation Recommendations

Fish and Essential Fish Habitat

Under Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation Management Act (Magnuson-Stevens Act), federal agencies are required to consult with the Secretary of Commerce on any action that may adversely affect EFH. The Corps has made a determination that the project may adversely affect EFH. NMFS agrees with this determination, and notes



there are less environmentally damaging alternatives available; specifically, the North Star alternative.

The Magnuson-Stevens Act requires NMFS to make conservation recommendations regarding any federal action that would adversely affect EFH. The construction and operation of the proposed project would adversely affect EFH and anadromous fish if the following conservation measures are not followed:

1. In addition to implementing the Best Management Practices listed in the EFH assessment, use vegetated swales and/or an oil/water separator (or equivalent system) to remove total suspended solids (TSS) and oil and grease from the ferry parking lot drainage system, associated buildings, and roads. Also, implement maintenance and monitoring plans for this system to ensure petroleum hydrocarbons do not adversely affect salmonids, other fish and their EFH. Non-point source pollution generated by the project can have deleterious effects on salmonids, particularly on juvenile growth. Petroleum hydrocarbons damage developing salmon eggs, larvae, and fry at extremely low concentrations, and also would likely adversely affect other fish populations, such as sculpin and Pacific cod, which may occur in nearshore areas.
2. As agreed with the Mat-Su Borough, avoid pile driving and other in-water work from April 1 through June 30 to avoid disturbing outmigrating smolt. Pile driving can generate intense sound pressure waves that may injure and kill fish, particularly juveniles.
3. Conduct in-water and intertidal work at low tide to the extent possible to decrease the amount of noise and sediments introduced to the water column.
4. Provide compensatory mitigation in accordance with 33 CFR Part 332 to ensure that “an activity requiring authorization under section 404 of the Clean Water Act and/or sections 9 or 10 of the Rivers and Harbors Act of 1899 is not contrary to the public interest.” The applicant’s decision to locate the ferry landing at Ship Creek Point-South will expand industrial development at the mouth of Ship Creek to the south; an area that is relatively undeveloped. This could effectively eliminate plans to reserve the area south of Ship Creek for multi-purpose, non-industrial uses, such as recreation and tourism. Additionally, locating the ferry landing at Ship Creek Point-South could eliminate (or reduce the benefit of) potential restoration projects in the Ship Creek estuary, especially those associated with mitigation funds from the Port of Anchorage expansion project.

Cook Inlet Belugas

The Cook Inlet beluga whale population is a small stock which is geographically and genetically isolated from other Alaskan beluga populations. Given the small size (375 whales in 2008) and threats facing the continued existence of the population, NMFS listed the Cook Inlet beluga whale stock as endangered under the Endangered Species Act (ESA) in October 2008. While belugas were once abundant and frequently sighted in lower Cook Inlet during summer, they are now primarily concentrated in the upper reaches of the Inlet. At this time, critical habitat has not been designated for the Cook Inlet beluga whales, however, in the Conservation Plan for the

Cook Inlet Beluga Whale published in October 2008, NMFS stratified Cook Inlet into three regions based upon patterns of beluga use and labeled them as valuable habitat types 1, 2, and 3.

Type 1 habitat is considered the most valuable to belugas given that it encompasses habitats which are important foraging and nursery habitats and has the most intensive beluga use from spring through fall. This project falls within Type 1 habitat. Furthermore, in 2008, more beluga whales were spotted using the Ship Creek area than in previous years.

Sound transmission and receipt is very important to Cook Inlet belugas, which spend their lives in the turbid and regularly darkened waters of Cook Inlet and thus are almost wholly dependent on the acoustic environment. Man-made noise has the capacity to harass or injure belugas, and may interfere or compete with a beluga's ability to communicate or locate prey. Scientific research on both captive and wild belugas has demonstrated adverse behavioral reactions to in-water noise. Obvious changes in whale behavior as a result of noise harassment would include sudden direction changes away from the noise source, whereas subtle changes in whale behavior may include complete avoidance of the areas near the noise sources. Construction of the proposed ferry terminals planned at Port MacKenzie and Ship Creek Point could disturb belugas given that noise levels would be significantly elevated, particularly during pile driving and other in-water work. Research has established noise thresholds at which belugas are harassed, and at which they are injured. For intermittent noises (such as noises resulting from impact hammers), the harassment threshold is 160 decibels referenced to one microPascal (dB re: 1 μ Pa) and the injury threshold is 180 dB re: 1 μ Pa. For continuous noises (such as noises resulting from vibratory hammers), the harassment threshold is 120 dB re: 1 μ Pa.

The applicant states that an underwater noise reduction plan "through the use of structural design and/or operational procedures" would be developed in consultation with NMFS. As stated in previous letters, NMFS encouraged the applicant to explore means to reduce construction and operation noise associated with the Knik Arm Ferry; we have postulated such efforts as the use of acoustic sleeves around piles and propeller cavitation reduction during docking. Other than the construction procedures listed (e.g., using a vibratory hammer to refusal before switching to an impact hammer; limiting impact hammer use to four hours per day), to our knowledge, no noise reduction plan involving the structural design or operation has been developed. There is also no discussion about the additional noise produced by the ferry itself, which is scheduled to run 16 round trips between Port Mackenzie and Anchorage per day, 7 days per week. Similarly, there is no mention about the life of the project or discussion regarding mitigation during maintenance, operation, or removal phases.

NMFS recognizes the minimization measures listed in the Public Notice of Application for Permit, but to better protect belugas from construction activities and noise, we request the words "should" and "would" be strengthened to "shall" or "will". Minimization measure 4, "Pile driving with an impact hammer" should be combined with Minimization measure 3, "Pile driving" given that we are adding requirements for pile driving with a vibratory hammer to paragraphs of section 4. We also request the following revisions (in italics) to the listed measures:

1. (Minimization 1. Consultation and studies; second paragraph). “To conduct a noise study while driving the first pile at Ship Creek to determine the *noise attenuation* radius surrounding the pile driving activities. *The radius surrounding the noise sources shall be based upon propagation loss-equations using data specific for this project, and shall identify the 120 dB distance for vibratory hammer use as well as the 160 dB and 180 dB distances for impact hammer use. Without a Small Take Authorization (under Section 101(a)(5) of the Marine Mammal Protection Act (MMPA)) and an Incidental Take Statement under the Endangered Species Act, belugas shall not be exposed to sound levels above 120 dB re: 1 μPa when using a vibratory hammer nor to sound levels exceeding 160 dB re: 1 μPa when using an impact hammer. Assuming a Small Take Authorization is obtained, belugas shall not be exposed to intermittent sound levels above 180 dB re: 1 μPa.*”
2. (Minimization 2. Noise safety perimeter). “A noise safety perimeter marked by buoys should be set up around the permit area, to indicate the *120 dB*, 160 dB, and 180 dB attenuation limits, depending on MMPA authorization.”
3. (Minimization 4. Pile driving with an impact hammer; first paragraph.) “A *third party marine mammal observer* is required to be present at the construction site, *during any in-water pile driving activities, regardless of the type of hammer used, and must have the authority to order work to stop immediately and without further approvals by the applicant/permitee.*”
4. (Minimization 4. Pile driving with an impact hammer; second paragraph.) “*The third party marine mammal observer shall begin watching for marine mammals 30 minutes prior to the start of in-water pile driving to assure no marine mammals are in the area. If belugas are spotted within the noise safety perimeter prior to pile driving activities, work may not begin until the whales pass beyond the noise safety perimeter. During pile driving, when belugas are spotted, the hammer operator shall be notified immediately that belugas are in the area, their location and direction of travel, and if shut down is required. The hammer operator must immediately stop all impact hammer work until the whales pass beyond the noise safety perimeter.*”

Conclusion

Please note that, under section 305(b)(4) of the Magnuson-Stevens Act, the Corps of Engineers (Corps) is required to respond in writing within 30 days to NMFS EFH Conservation Recommendations. If the Corps does not make a decision within 30 days, the Corps should provide NMFS with a letter to that effect, and indicate when a full response will be provided. Furthermore, under section 7(a)(2) of the Endangered Species Act of 1973, the Corps is required to consult with NMFS to ensure that any action authorized, funded, or carried out by the Corps is not likely to jeopardize the continued existence of Cook Inlet beluga whales.

Brian Lance is the NMFS EFH contact for this project, and can be reached by telephone at (907) 271-1301 or email at brian.lance@noaa.gov. Mandy Migura is the NMFS beluga contact for this project, and can be reached by telephone at (907) 271-1332 or email at mandy.migura@noaa.gov.

Sincerely,



Robert D. Mecum
Acting Administrator, Alaska Region

cc:

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Records