UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
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January 11, 2006

Mark Anderson
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Preliminary Design and Environmental
Southeast Region
Alaska Dept of Transportation & Public Facilities
6860 Glacier Highway
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Re: Haines Ferry Terminal Mooring, Phase B, Project #75249, Federal # NH-095-5(6)

Dear Mr. Anderson:

The National Marine Fisheries Service (NMFS) has reviewed your request for comments regarding the referenced project, which would remove and replace two damaged existing timber mooring structures and add a new mooring structure at the Haines Ferry Terminal facility in Lutak Inlet. The damaged moorings would be replaced with three new steel mooring structures. The new structures would be constructed of four 30" diameter by ½" walled open-end pipe piles supporting a steel cap. Each mooring structure would have six 48'' cylindrical rubber cushions and a steel fender pile with UHMW polyethylene facing. Four catwalks (three new catwalks and one existing catwalk to be reused) are required for safe access to the new mooring structures. All of the catwalks are four foot wide steel tube-frame structures with open steel grate decks and steel pipe handrails.

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires Federal action agencies to consult with NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect essential fish habitat (EFH). Your letter indicates that the project will impact habitat for migrating adult and juvenile salmon, sculpins and herring in Lutak Inlet, and that an EFH assessment will be provided to NMFS for review. An anadromous fish stream with numerous tributaries (Alaska Department of Fish and Game catalog #115-33-0010, USGS Quad, Skagway B-2) is located approximately four miles northwest of the project site at the head of Lutak Inlet. This system supports runs of sockeye, coho, pink, and chum salmon as well as Dolly Varden char and cutthroat trout.

As mitigation you have indicated that the project footprint has been minimized, and that work will occur during appropriate timing windows recommended by resource agencies. NMFS recommends a no in-water work window of March 15 to June 15 to protect spawning herring and out-migrating salmonids from disturbance due to pile driving activities. We recommend the following measures to reduce sound pressure levels and other impacts that may harm fish.

1.) All work below the high tide line should be limited to low tidal stages to reduce sound transmission and turbidity.

2.) Drive piles with a vibratory hammer. If an impact hammer is required because of substrate type or the need for seismic stability, piles should be driven as deep as possible with a vibratory hammer before the impact hammer is used. Vibratory hammers generally produce less intense sounds than impact hammers (NMFS, 2005). Further, fish have been observed to avoid sounds similar to those produced by vibratory hammers and to remain within the field of harmful sound associated with an impact hammer (Dolat, 1997).

3.) Surround piles with an air bubble system. The use of both confined and unconfined air bubble systems may attenuate underwater sound pressure levels up to 28 dB re:1μ Pa (NMFS 2005).

4.) Reduce force used to drive the pile by using a smaller hammer or a hydraulic hammer for which the force of the hammer blow can be controlled (NMFS 2005).

NMFS is also responsible for administering the Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA). Species listed under the ESA that may occur in the project area include threatened Steller sea lions, and endangered humpback and minke whales. Marine mammals that may occur in the project area include harbor seals, Dall's porpoises, harbor porpoises, and killer whales. Seals and sea lions congregate near the mouths of anadromous streams in spring and fall. Humpback whales move into upper Lynn Canal in the spring and summer to feed. All of these species may occur in the area at any time of year on an opportunistic basis. You have indicated that scanning for marine mammals while driving the twelve steel piles and stopping pile driving activities if they are observed to approach within 200 meters is recommended. Please be advised that NMFS has further developed its rationale and recommendations to prevent harm of marine mammals from pile driving noise as follows.

Pile driving may introduce high levels of pulsed or continuous noise into the water column with the potential to harass or injure marine mammals. Sound pressure levels in the range of 130-135 dB re: 1μPa have been measured up to one kilometer from an active pile driver (Johnson et al. 1986). Humpback whales have been observed to react to sound pressure levels greater than 115-129 dB re:1μPa within 200 meters of a sound source (Zoidis, pers. comm.). The type and intensity of noise produced during pile driving depends on a variety of factors, including the type and size of pile, the firmness of substrate into which the pile is being driven, the depth of water, bottom characteristics, and the size and type of the pile-driving hammer. The following recommendations are suggested to protect marine mammals from pile driving disturbance.

1.) Drive at least one test pile prior to construction. During installation of the test pile, sound pressure levels should be monitored to determine the area in which they are ≥160 dB re:1 μPa if an impact hammer (pulsed noise) is used or ≥120 dB re: 1μ Pa if a vibratory hammer (continuous noise) is used (i.e., impact area). A sufficient number of piles should be driven to reasonably estimate the size and location of the area. Results of this investigation should be presented to NMFS' Juneau office with the estimate of the impact area. Test piles should not be driven if marine mammals are observed within 200 meters of the sound source. This recommendation is based on observed responses of humpback

whales to sound sources (Zoidis, pers. Comm.) and measurements of sound pressure levels of 159 dB re: 1μPa approximately 200 meters from a pile driver driving a 14-inch diameter hollow steel pile.

2.) A NMFS-approved qualified marine mammal observer, who has stop work authority, should scan the area for the presence of marine mammals and direct pile driving to cease if they are observed within the impact area. The observer should direct pile driving to cease if the activity, including test pile driving, is disturbing marine mammals at any distance from the sound source.

Thank you for the opportunity to comment. If you have any further questions, please contact Linda Shaw at 907-586-7643.

Sincerely,

Robert D. Mecum
Acting Administrator, Alaska Region

cc: *EPA Juneau, Chris Meade
*ADF&G, Tom Schumacher
ADEC, ADNR, USFWS, Juneau
*email

Literature Cited

Dolat, S.W. 1997. Acoustic measurements during the Baldwin Bridge Demolition (final, dated March 14, 1997). Prepared for White Oak Construction by Sonalysts, Inc., Waterford, CT/34 pp + appendices.

Keevin, T.M. and G.L. Hempen. 1997. The environmental effects of underwater explosions with methods to mitigate impacts. U.S. Army Corps of Engineers. https://www.denix.osd.mil/denix/Public/ES-Programs/Conservation/WaterX/water1.html

Johnson, S.R., C.R. Greene, R.A. Davis, and W.J. Richardson. 1986. Bowhead whales and underwater noise near the Sandpiper Island drill site, Alaskan Beaufort Sea, autumn 1985. Reprinted from LGL Limited Environmental Research Associates, King City, Ontario, and Greeneridge Sciences Inc., Santa Barbara, CA, for Shell Western Exploration and Production Inc., Anchorage, AK. 130 p.

National Marine Fisheries Service. 2005. Final Environmental Impact Statement, Essential Fish Habitat Identification and Conservation in Alaska, Vol. 2, Appendix G; National Marine Fisheries Service, Department of Commerce. April, 2005.