



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

*National Marine Fisheries Service*

*P.O. Box 21668*

*Juneau, Alaska 99802-1668*

January 17, 2006

Colonel Timothy J. Gallagher  
District Engineer  
U.S. Army Corps of Engineers  
P.O. Box 898  
Anchorage, Alaska 99506-0898

Re: POA-1985-696-2  
Port Frederick

Attn: Randal Vigil

Dear Colonel Gallagher:

The National Marine Fisheries Service (NMFS) has reviewed the above referenced proposal by the City of Hoonah to construct a marine industrial center that will service boat haulout and marine cargo operations. Work would consist of the discharge of approximately 115,000 cubic yards of shot rock, 9,000 cubic yards of class IV riprap, and 3,800 cubic yards of base course grading C-1 surfacing material into 3.8 acres below the high tide line (approximate elevation +19.3 feet above the 0.0 foot contour). Additional work would include installation of approximately 600 linear feet of sewer line, 500 linear feet of water line, 1,200 linear feet of storm drainage system, and 3 oil/water separators within the proposed fill, and installation of approximately 59 galvanized steel piles and approximately 230 linear feet of sheet piling below mean high water (approximately +13.9 feet above the 0.0 foot contour). You have indicated that the project may adversely affect 3.8 acres of Essential Fish Habitat (EFH) for juvenile and adult salmon, groundfish and crab, and associated species such as major prey and predator species which are not covered by Fishery Management Plans. No mitigation to offset these impacts is proposed.

Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act requires Federal agencies to consult with NMFS on all actions that may adversely affect Essential Fish Habitat (EFH). NMFS is required to make conservation recommendations, which may include measures to avoid, minimize, mitigate or otherwise offset potential adverse effects. Several anadromous fish streams are located within five miles of the project site, collectively supporting runs of coho, chum and pink salmon, and Dolly Varden trout (Alaska Department of Fish and Game anadromous fish catalog stream #s 114-34-10080, 10090, and 10100). Consequently, juvenile salmon use the inshore areas of Hoonah Harbor during spring and early summer for feeding and predator avoidance prior to migration out to sea. Your public notice for this project further notes that the project may adversely affect approximately 3.8 acres of EFH for juvenile and adult salmon, groundfish and crab and associated species, such as major prey or predator species, not covered by a fishery management plan.

We offer the following EFH Conservation Recommendations pursuant to Section 305(b)(4)(A) of the Magnuson-Stevens Act:



1. For the wooden components of the new structures (float sections and approach docks), the use of any wood that has been surface or pressure-treated with creosote or treated with pentachlorophenol should be prohibited and alternatives to treated wood that have no or reduced toxicity should be used wherever practicable.
2. Any wood that comes in contact with marine or aquatic environments should be treated with waterborne preservatives approved for use in aquatic and/or marine environments. These include, but are not limited to: Chromated Copper Arsenic (CCA) Type C, Ammoniacal Copper Zinc Arsenate (ACZA), Alkaline Copper Quat (ACQ), Copper Boron Azole (CBA) or Copper Azole (CA). The applicant should only use wood that has been treated in accordance with best management practices developed by the Western Wood Preservers Institute. Treated wood should be inspected before installation to ensure that no superficial deposits of preservative material occur on the wood.
3. Over-water wood structures should be designed to prevent abrasion and splintering of wood.
4. All cutting and boring of treated wood should take place in upland areas; all waste materials should be kept out of the aquatic environment and be properly disposed of upland. Treated wood materials should not be stored in-water. Any cut wood, chips or sawdust from treated wood should be collected promptly and disposed of at an acceptable upland site.
5. All work below the high tide line should be limited to low tidal stages to reduce turbidity.
6. No in-water work should be permitted from April 1 through June 15 of any year to protect out migrating salmon.

For pile driving activities, we offer the following recommendations to reduce sound pressure levels that may harm fish.

7. 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).
8. 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:1 $\mu$  Pa (NMFS 2005).
9. Reduce force used to drive the pile by using cushion blocks and a smaller hammer or a hydraulic hammer for which the force of the hammer blow can be controlled (NMFS 2005).

Use of the upland staging, wash down and loading bay areas will introduce stormwater runoff containing sediments, petroleum products and any cleaning, maintenance or repair fluids to the marine environment. Studies show that petroleum hydrocarbons are damaging to developing salmon eggs and fry at extremely low levels of concentration (Marty, et al., 1997). The biological effects of polyaromatic hydrocarbons (PAH) on pink salmon larvae were significant

when concentrations were as low as 4.4 micrograms per liter and would likely have similar impacts on other early life stages and species of fish. Project plans show three storm drain outlets connected to oil/water separators emptying directly into marine waters through a steel grate. Although three oil/water separators are mentioned in the plans, no information is provided on their capacity or maintenance. Oil water separators must be maintained on a regular basis to function properly and maintenance is an unenforceable condition for the Corps of Engineers permit. For the project design we offer the following EFH conservation recommendation.

10. NMFS recommends that the project be redesigned to discharge stormwater runoff through a vegetated upland area with adequate passive treatment, such as settling pond or vegetated swale.

Under section 305(b)(4) of the Magnuson-Stevens Act, the Corps is required to respond to NMFS EFH recommendations in writing within 30 days. If the Corps will not make a decision within 30 days of receiving NMFS EFH Conservation Recommendations, the Corps should provide NMFS with a letter within 30 days to that effect, and indicate when a full response will be provided.

NMFS is also responsible for administering the Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA). Port Frederick and Icy Strait are frequented by endangered humpback whales, threatened Steller sea lions, harbor seals, killer whales, Dall's porpoise, harbor porpoise, and may be occasionally visited by endangered minke whales. All of these species are protected under the MMPA from harassment or injury. Alaska Marine Highway system sightings collected from 1993 to 1997 show humpback whales occurring in the project area from Hoonah Harbor and Frederick Sound into Icy Straits from May to December in group sizes of 1 to 12 (Mizroch et al., 1998)

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: 1 $\mu$ Pa 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: 1 $\mu$ Pa 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.

We offer the following recommendations to protect marine mammals from disturbance due to pile driving.

- 1.) The applicant should drive at least one test pile prior to construction to determine the extent of the impact area to be used by an observer to determine safe distances for marine mammals from the sound source. During installation of the test pile, sound pressure levels should be monitored to determine the area in which they are  $\geq 160$  dB re: 1 $\mu$  Pa if an impact hammer (pulsed noise) is used or  $\geq 120$  dB re: 1 $\mu$ Pa if a vibratory hammer (continuous noise) is used. Equipment and materials consistent with project construction

should be used. A sufficient number of piles should be driven to reasonably estimate the size and location of the impact area. Test piles should not be driven if marine mammals are observed within 200 meters of the sound source. This safe distance recommendation is based on observed responses of humpback whales to sound sources (Zoidis, pers. comm.) and measurements of sound pressure levels at 159 dB re: 1 $\mu$  Pa 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. The observer should direct pile driving to cease when marine mammals 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.

The recommended conditions will reduce the likelihood that this work may injure or harass marine mammals. However, the MMPA prohibits the taking, including unintentional harassment, of marine mammals unless otherwise authorized. The applicant should be advised of the availability of small take permits under section 101 (a) (5) of the MMPA which allows citizens of the United States to take marine mammals provided such take is incidental but not intentional and involves no more than a negligible impact to the species. Information on these authorizations may be found on our website at <http://www.nmfs.noaa.gov/pr/permits>.

If you have any further questions, please contact Linda Shaw at 907-586-7643.

Sincerely,



Robert D. Mecum  
Acting Administrator, Alaska Region

cc: Applicant  
\*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.

Johnson, S.R., C.R. Greene, R.A. Davis, and W.J. Richardson. 1986. Bowhead whales and underwater noise near the Sandpiper Island drillsite, 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.

Mizroch, S.A., L. Shaw, K. Laidre, and K. Brix. *Draft Seasonal Distribution of Marine Mammals in Alaska*. July 20, 1998. 18pp.

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.