



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

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

January 31, 2007

Colonel Kevin J. Wilson
District Engineer, Alaska District
U.S. Army Corps of Engineers
P. O. Box 898
Anchorage, Alaska 99506-6898

Re: POA-2003-502-N
Ship Creek

Attn: Ryan Winn

Dear Colonel Wilson:

The National Marine Fisheries Service (NMFS) is writing this letter to advance discussions on mitigation for the Port of Anchorage (POA) Marine Terminal Redevelopment Project. This letter is a follow-up to our March 22, 2006 letter which responded to your Public Notice. That letter provided information on living marine resources and potential adverse effects from the proposed POA expansion on our trust resources, and made several recommendations to avoid, minimize, and compensate for those adverse effects.

Currently, it is our understanding that the Corps of Engineers (Corps) is involved in discussions with the POA on a draft mitigation plan. In part, our recommendation to the Corps was to establish an interagency committee to develop a mitigation plan. We remain willing to work with the Corps on this and look forward to being contacted for that cooperative effort. The following comments are meant to further those discussions.

Alternatives Analysis

In a follow-up meeting to the Public Notice, you requested that the POA evaluate the feasibility of a partially pile supported design, without regard to cost. We understand from your staff that the POA declined to do as you requested, based on the cost of building such a design.

The Corps has provided us with responses by the POA on several issues; including comments on living marine resources and NMFS recommendation that the Corps deny the POA permit because the applicant has not demonstrated the preferred alternative is the least environmentally damaging practicable alternative. We appreciate the chance to review this information and will be providing a response to the Corps under a separate cover.

Cumulative Effects and Land Use Planning

We commend the Corps for taking the initiative to have their Engineering Research and Development Center (ERDC) review the applicant's preferred design as it relates to its integrity



and potential impacts to the Corps' responsibilities for maintaining the adjacent federal navigation project. We would be interested in the ERDC study results and an explanation of how that information will be used by the Corps in the permit decisions.

NMFS remains concerned about the number of projects that are moving forward in Knik Arm and the Ship Creek estuary. NMFS is concerned that the cumulative impacts of these projects on our trust resources are being overlooked due to the need to meet individual project timelines. These various projects may ultimately preclude opportunities to enhance the ecological function, accessibility, and attractiveness of the Ship Creek estuary to the public, while only promoting industrial and commercial development.

The POA has argued the need for 135 acres of fill for a variety of needs, including the ability to provide space for new, yet unidentified, customers. We recommend that in keeping with planning documents (including the 1988 POA and Municipality of Anchorage Ship Creek Concept Plan and the Recommendations of the 1998 Ship Creek Enhancement Citizens Advisory Task Force), the COE should promote the opportunities to enhance the maritime and recreational role of Ship Creek, and increase its accessibility and attractiveness. This could include relocating existing activities along north Ship Creek (North Star Terminal) to the POA expansion site. This would allow most industrial marine operations to be located in one area, at the POA, while allowing for restoration opportunities to rehabilitate and enhance the Ship Creek estuary that can be better used by salmon (juvenile and adult), other marine fish, and belugas.

Such an effort could also enhance development opportunities. Currently, the Matanuska-Susitna Borough is seeking a permit to build a ferry dock terminal. Freeing up the North Star terminal by locating current operations at the new POA expansion site would alleviate concerns that have been raised by the Matanuska- Susitna Borough regarding potential conflicts, and still allow for the security needed for the entire industrial and commercial waterfront.

Mitigation Plan

As stated above, NMFS looks forward to participating in the interagency committee to develop a mitigation plan for the POA expansion project. NMFS would like to remind the Corps of our earlier mitigation recommendations to this project, and update our mitigation requests where needed. The following recommendations are meant to capture our concerns specific to Cook Inlet belugas:

Recommendation 1. Acoustics Characterization and Mitigation

The POA should fund and conduct an evaluation of noise levels in lower Knik Arm waters associated with their expansion construction and operations. This analysis should include development of an industrial 'sound index' that represents the POA expansion construction and operational noises. The POA Sound Index should accurately represent construction and operational sounds including, but not limited to: pile driving, dockside activities, vessel traffic in the channel, dredging, and docking activities. Under this recommendation, the POA should acquire in-water noise measurements to: 1) establish a time series characterizing the POA

operational noise levels (pre-expansion), 2) develop an engineering report with recommendations for noise reduction through structural or operational means, and 3) implement any such recommendations that are within the authority of the POA and/or Municipality of Anchorage. The overall goal is to have a noise signature from the expanded POA that is less than that of the existing facility. This noise reduction plan should be finalized and available for NMFS review with two years left for construction.

This evaluation of noise levels in lower Knik Arm waters will provide noise exposure data collected concurrent with beluga monitoring. Both efforts will verify whether the expansion construction and operational work will present a negligible effect to the Cook Inlet beluga population. The POA Sound Index will provide noise exposure data to interpret the effect of POA noise on beluga whale presence or absence, and any altered behavior observed during construction and operations (i.e., a dose-response analysis). An annual review of beluga observations and noise exposure data should be provided to NMFS no later than February 1 of the following year. This annual review would provide an effective mechanism to minimize noise levels by modifying construction plans, based on the best available information collected by both NMFS and non-NMFS researchers. NMFS encourages the other users on lower Knik Arm, in addition to the POA, to reduce underwater anthropogenic noise sources in Cook Inlet to promote the beluga recovery. Therefore, results from this annual review effort will be shared with the Matanuska-Susitna Borough, Knik Arm Bridge and Toll Authority, Alaska Railroad, oil and gas industry, and other Cook Inlet users.

Recommendation 2. Beluga Whale Monitoring

The POA currently has contracted for beluga whale monitoring near the POA. This study has three primary objectives, as stated in the POA reports: 1) Estimate the frequency at which beluga whales are present in the project footprint; 2) Characterize habitat use and behavior of belugas near the POA during ice free months; and 3) Map sound levels and attenuation with distance related to POA background noise and expansion activity.

In collaboration with NMFS, the POA beluga monitoring program currently has observers at one of two sites (Cairn Point and POA) for six hours a day, twice weekly. This meets Objective 1 and Objective 2 (as stated above). One interesting disparity in the monthly reports from April through September 2006 is the modification of the third objective: from mapping sound levels and attenuation to “provide information to the POA on beluga whale sightings and locations relative to construction”. This modification was not previously discussed with our agency, nor is it acceptable to us for two reasons: First, an essential element of this monitoring is to characterize the effect of received noise on belugas. Secondly, this revision duplicates the first objective: “estimate the frequency at which beluga whales are present in the project footprint.” We recommend the modification be retracted, re-instating the original language for objective number 3, and inserting a new objective Number 4 to read as follows: “4) Characterize and assess the impacts of received noise from the POA on beluga whale behavior and movements within lower Knik Arm.” Therefore, the beluga monitoring program should be expanded beyond current effort to address new objective Number 4. The POA should develop and present to NMFS for approval a study which includes the proposed research design. Any study proposal should be coordinated with NMFS and should include:

- 1) **Shore-based Observations:** Shore-based observations will monitor beluga frequency and behavioral changes in lower Knik Arm, especially around the POA and the expansion footprint. These observations will need to detect a 50 percent change in passage rate into and out of lower Knik Arm. NMFS is very concerned about interference with beluga passage rate and use of Knik Arm. More shore-based observations may be required to achieve the desired power.
- 2) **Passive Acoustics:** The POA should fund and conduct a passive acoustics plan to validate visual observations. A hydrophone(s) should be placed near the POA expansion to detect passing whales. The POA should determine the proportion of belugas missed from shore-based surveys. An evaluation of detection bias is critical to assess the power of survey techniques.

Recommendation 3. Safety Zones

The POA should establish and enforce safety radii and shut down standards around the in-water pile driving areas. Initially, safety radii will be based on conservative estimates from Blackwell's (2005) study at the Port MacKenzie dock. That will require shut down for any whale observed within 200 feet of a vibratory driver or 6,000 feet for an impact hammer. The POA will conduct on-site underwater noise surveys to verify the 190, 180 and 160 dB re 1 μ Pa rms isopleths from in-water pile driving activities for the POA expansion. Safety zones appropriate to the POA site conditions and equipment will then be empirically determined and implemented. The 160 dB re 1 μ Pa rms safety zone should be in force unless the POA obtains authorization under the section 101 (a) of the Marine Mammal Protection Act for the incidental and unintentional taking of marine mammals; in which case the safety zones should be 180 dB re 1 μ Pa rms for whales and 190 dB re 1 μ Pa rms for seals.

Safety zones around pile driving areas should be monitored for marine mammal presence before, during, and after any pile driving activity. If the safety radius is obscured by fog or poor lighting conditions, pile driving should cease until the entire safety radius is visible.

Recommendation 4. Construction

Prior to the start of pile driving activity, the POA should require a briefing between the construction supervisors and crews, the marine mammal monitoring team, acoustical monitoring team, and POA expansion team. The purpose of this briefing will be to establish party responsibilities, define the chains of command, discuss communication procedures, provide an overview of monitoring purposes, and review operational procedures. The Project Engineer will have the authority to stop or delay any construction activity in order to ensure any sighted marine mammal is no longer within the zone of impact.

Recommendation 5. Pile Driving

The POA should officially notify NMFS of the date each year's pile driving activities are to commence.

The POA should establish "soft start" or "ramp up" procedures for pile driving activities. The soft start technique will be used at the beginning of each piling installation. This allows any marine mammal that may be in the area to leave before pile driving activities reach full energy. The soft start will require contractors to initiate noise from vibratory hammers for 15 seconds at reduced energy, followed by a one minute waiting period. If marine mammals are sighted within the safety zone prior to pile-driving, or during the soft start, the Resident Engineer (or authorized individual) will delay pile-driving continuation until the mammal has moved outside the safety zone. Pile driving will start or resume only after the marine mammal is identified to have moved outside the safety zone by a qualified observer or after 15 minutes have elapsed after the sighting.

To the maximum extent practicable, pile-driving should be completed in dry conditions. Steel pile driving required for the barge terminal above elevation +10 should occur at low tides in dry conditions whenever feasible. Sheet pile for tail walls should be embedded in dry fill whenever feasible, recognizing that water depths and tides at the POA expansion site prohibit pile driving in dry conditions entirely.

Recommendation 6. Beluga Whale Outreach and Education

The POA should erect beluga notification signage in waterfront viewing areas near the Ship Creek public boat launch area. This signage will provide education awareness on the Cook Inlet beluga status and will provide the public with directions to report beluga sightings to NOAA/NMFS. POA will consult with NOAA/NMFS to establish sign criteria.

The POA should erect similar signage within the secured POA area and entrance, visible to all port users, to improve their established long-term formalized marine mammal sighting and notification procedure. This will be expanded for any port user, visitor, tenant, or contractor, not related to the POA expansion. These procedures clearly identify roles and responsibilities for reporting requirements. All reports should disseminated to the NOAA/NMFS by the POA within 24 hours.

Recommendation 7. Marine Mammal Observers

The POA should require pile driving contractors to have two full-time shore-based marine mammal observers under contractual obligation during in-water construction. The shore-based marine mammal observers should complete a daily field observation log during construction.

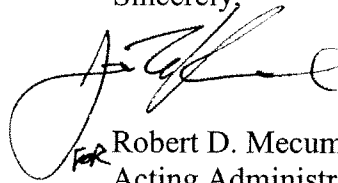
Recommendation 8. Marine Mammal Protection Act, Small Take Authorization

The POA should coordinate with NOAA/NMFS to receive Small Take Authorization, under the Marine Mammal Protection Act. An Incidental Harassment Authorization (IHA) petition has been submitted by POA for the 2007 season and a Letter of Authorization (LOA) petition has been submitted for years 2008-2012. If an IHA and/or LOA is issued by NMFS, all terms and conditions of this IHA and/or LOA supersede Recommendations 3, 4, 5, 6, and 7.

Summary

We look forward to working with the Corps as you identify the least environmentally damaging practicable alternative. Once that alternative has been identified, we are committed to working with the Corps and other agencies in preparing a complete mitigation package including the above recommendations regarding marine mammals. Please contact Barbara Mahoney or Brad Smith regarding questions on marine mammals and protected resources. Questions on Essential Fish Habitat and habitat conservation should be directed to Brian Lance or Jeanne Hanson. They can be reached at 271-5006.

Sincerely,



Robert D. Mecum
Acting Administrator, Alaska Region

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Records