



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

July 17, 2007

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

Re: POA-2006-37-2
Passage Canal

Attn: Serena Sweet

Dear Col. Wilson:

On April 17, 2006 the Corps of Engineers (Corps) issued a Public Notice for the Alaska Railroad Corporation (ARRC) for a proposed two-phased project to demolish an existing pile supported dock and dolphins dock and replace it with a combination sheet pile fill pad and floating dock, in Whittier, Alaska. At this time, a final design and construction date are not known; however, as a result of that public review it was recognized that compensatory mitigation would be required to complete the project as proposed.

On July 11, 2007, staff from the National Marine Fisheries Service (NMFS) the Conservation Fund and the Corps participated in a conference call regarding the need and nature of compensatory mitigation for the Alaska Railroad Corp. Compensatory mitigation is being calculated on the full build alternative. Phase 1 is demolition of the existing 660 by 1,100-foot wharf, which includes placement of up to 0.65 acres of fill to support the existing sheet pile. Phase 2 consists of construction of a combination sheet pile fill pad and floating dock. A total maximum of 75,000 cubic yards of would be placed to construct the fill pad, with up to a maximum of 1.5 acres essential fish habitat (EFH) impacted. A percentage of the 3,500 cubic yards of concrete created from the demolition would be used to construct an artificial reef (maximum 2 acre footprint) as mitigation for the aforementioned impacts to EFH.

The Conservation Fund and Corps initially used a market based calculation of \$10,000 per acre (present-day real estate value) to determine the amount of \$15,000 compensatory mitigation for this project ($\$10,000 \times 1.5 \text{ acres} = \$15,000$). This follows mitigation used on a similar action in Whittier; (the new state ferry dock facility), adjacent to the proposed project. This amount does not adequately reflect the value of the habitat being lost. A methodology based upon a restorative replacement cost of the habitat being lost would go further in mitigating impacts to living marine resources including EFH. NMFS would like to work with the Conservation Fund and the Corps in transitioning from a market based mitigation method to an approach based on restorative replacement cost. For the proposed project, this would require restoration/construction of 900 linear feet of low relief complex habitat (i.e. the 60-year-old riprap). It is unlikely \$15,000 would cover the cost of this type of restoration effort.



For the proposed project, NMFS suggests using the market based calculation of \$10,000 as a starting point and adjusting that figure to reflect the habitat functions lost due to impacts from the proposed project.

The project site is characterized by a mixed substrate of mud and gravel, as well as riprap installed by the Army in the 1940s. While the area is previously impacted by industrial activity, the riprap under the existing pile dock has been colonized by submerged aquatic vegetation (SAV) as well as associated invertebrates and fish. Due to the myriad of interstitial spaces, the riprap provides habitat complexity as well as a two to one slope allowing for preservation of a shallow water migratory corridor for juvenile fish. Thus, the riprap provides habitat for Pacific cod, rockfish, wolf eel, lingcod, and sculpin.

The 900 feet of sheet pile bulkhead, as described in the proposed project, presents a substantial barrier to juvenile fish movement. The vertical face of a sheet pile wall provides no cover, resulting in higher predation rates, and increases tidal shear velocities along the face of the wall, making nearshore fish movement more difficult and energetically expensive. Both these factors have the potential for reducing survival for juvenile marine fish, as well as salmonid smolt. In addition, this stretch of coastline has undergone substantial development over the last few years (e.g. the state ferry terminal, AML dock expansion, and the Whittier Harbor expansion). Thus, the cumulative loss from 900 feet of sheet pile bulkhead to what is a substantial portion of the remaining shallow water habitat must also be considered.

The calculation of \$15,000 was based on the figure of \$10,000 per acre and a mitigation ratio of 1:1. Due to the high value of nearshore EFH, and the complexities involved in marine restoration attempts, NMFS recommends compensatory mitigation for impacts to marine habitat should be based on a ratio of at least 2:1, depending on habitat quality. Previously disturbed habitat would rank lowest, while vegetated rocky habitat and coral habitat would rank highest. A degree of flexibility in this calculation should be allowed for local knowledge/data on habitat use and function, as well as cumulative impacts. Given the functional attributes of the riprap that will be lost by construction of a sheet pile wall, NMFS recommends using a mitigation ratio of 2:1 or 3:1 for this project. Using \$10,000 per acre market value, 1.5 acres of EFH would require \$15,000 based on a 1:1 ratio; a 2:1 ratio would increase the total compensatory mitigation to \$30,000 or \$45,000 for 3:1. Therefore, NMFS recommends the Corps use a figure of \$30,000-\$45,000 in compensatory mitigation for impacts to EFH from ARRC's proposed project. This figure more accurately reflects replacement costs for the low relief complex, rocky habitat impacted from the proposed project, as well as removal of shallow water migratory corridor for juvenile fish.

NMFS appreciates the opportunity to work with the Corps, the Conservation Fund and the ARRC regarding compensatory mitigation for the proposed project. In addition, we look forward to further collaboration with the Corps, the Conservation Fund and other interested resource agencies in adjusting the current market-based mitigation approach to encompass the

unique, intrinsic values of marine habitats, with the objective of moving toward a replacement value compensatory mitigation model. Brian Lance is the NMFS contact and can be reached at 907 271-1301 or brian.lance@noaa.gov.

Sincerely,



Robert D. Mecum,
Acting Administrator, Alaska Region

cc:

NOAA/AKR/Records

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