



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

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

May 15, 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 Colonel Wilson:

The National Marine Fisheries Service (NMFS) has reviewed the above referenced public notice regarding a proposal Alaska Railroad Corporation (ARRC) for a two-phase project to replace the Marginal Wharf in Whittier (Passage Canal), Alaska. 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 construction phase is not scheduled due to funding restrictions with the ARRC. Funding uncertainties have also prevented selection of a final design (i.e. total footprint, and relative percentages of sheet pile and floating dock). Thus, compensatory mitigation for the project was calculated on a worst case design scenario (largest total footprint and all sheet pile dock). The applicant also proposes to complete a demolition work and reef construction between October 1 and March 1 and/or during low tide stages. Once funding and final design for the construction phase are known, NMFS will expect the applicant to avoid and minimize to the extent practicable. Should final project design exceed the maximum footprint described in the public notice, NMFS reserves the right to request further compensatory mitigation for impacts to EFH.

The marine waters of Passage Canal, including the proposed project site, have been designated as Essential Fish Habitat (EFH) for all species of Pacific salmon, as well as sculpin, sablefish, flathead sole, rock sole, yellowfin sole, Pacific cod, walleye pollock, and arrowtooth flounder. Anadromous fish streams in Passage Canal support runs of chum and pink salmon; these species are likely to occupy the proposed project site at various times of year for feeding and migration. In addition, the Alaska Department of Fish and Game has released coho and chinook salmon smolts into Whittier Creek and Cove Creek for a sport fishery.

Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act requires interagency consultation for any federal action that may adversely affect EFH. Dredging activities can contribute sediment to the marine environment, potentially decreasing fish feeding efficiency, damaging gills, and smothering benthic organisms. Filling tidelands causes the permanent loss of habitat features that support feeding, refuge from predators, and rearing. The proposed project would result in the permanent loss of up to a maximum of 1.5 acres of EFH.



characterized by mixed hard and soft habitats used by juvenile fish. The Corps has determined that the proposed project may adversely affect EFH. NMFS concurs with that determination and offers the following conservation recommendations:

- (1) All dredge and fill activities should be completed between October 1 and March 31. Outmigrating salmonids (pink salmon) and juvenile marine fish begin moving into the project area in April with large pulses of coho, Chinook, and sockeye by mid-May.
- (2) During dredging activities, a silt curtain should be installed and maintained. The curtain should completely enclose the dredge area, extend to the bottom, and remain in place until construction is completed and the side slopes have been stabilized. As discussed above, dredging induced turbidity can decrease fish feeding efficiency and smother benthic organisms.
- (3) All dredge material must be free of contaminants as per the Alaska Department of Environmental Conservation's dredge material testing plan. Dredging activities have the potential to suspend contaminants trapped in the substrate into the water column, where they may become biologically available to living marine resources.
- (4) The applicant must submit a blasting plan for review and approval by the Corps, in consultation with NMFS. In-water blasting has the potential to injure or kill fish and marine mammals.
- (5) A vibratory hammer should be used to drive all sheet pile to the extent practicable. Noise produced by pile driving can injure and kill fish. Vibratory hammers produce less noise than impact hammers.
- (6) Compensatory mitigation is appropriate for this project. This project is similar to another project recently constructed in Passage Canal (POA-2005-404-2) for Alaska Marine Lines and our comments and recommendations, regarding compensatory mitigation, will be correspondingly similar. For that project, Alaska Marine Lines agreed to create an artificial reef in nearby Smitty's which was subsequently deployed in May 2006. NMFS collaborated with the U.S. Fish and Wildlife Service on a companion reef to the Alaska Marine Lines mitigation reef as part of a greater effort to evaluate the practicality of using "designed" concrete-based structures (i.e. Reefballs and Fish Havens) for reefs to provide compensatory mitigation in coastal Alaska waters. As previously coordinated with POA-2005-404-2, NMFS preferred mitigation for this project is at a compensation ratio of 1:1. Examples of potential mitigation follow:
 1. ARRC has proposed to construct an artificial reef as mitigation for damages to EFH. Unlike the previous artificial reef, this project would utilize scrap concrete produced from demolition of the Marginal Wharf. Scrap concrete has been used successfully in warmer waters, but data are lacking on colonization rates of submerged aquatic plants and associated invertebrate and fish communities at higher latitudes. The major objective and benefit of this mitigation is to test the efficacy of using scrap concrete as a reef material in Alaskan waters, and to make gross comparisons to the designed reef structures deployed in Smitty's Cove. As such, mitigation should include a monitoring program that addresses the following goals and objectives:

- (1) document the marine community at the artificial reef

- a. describe spatially and temporally the plant and invertebrate assemblages colonizing the reef
 - b. document fish species diversity and abundance and compare with designed structures in Smitty's Cove
- (2) determine if artificial reef communities enhance the immediate marine environment; and,
- (3) assess the utility of scrap concrete as a material source for artificial reefs as a fish habitat enhancement and restoration tool.

NMFS suggests that the monitoring plan include two sampling periods per year (May – September) for five years following deployment. A baseline survey should be conducted during summer 2007, with two sampling periods (May – September). Sampling protocol should include diver assisted video surveys, drop camera, and/or fish trapping. For comparison purposes, sampling methodology should follow that used in Smitty's Cove artificial reef study to the extent practicable. A monitoring plan should be reviewed and approved by NMFS prior to issuance of a permit. The applicant should be responsible for the monitoring program, providing NMFS with an annual progress report. NMFS responsibility is advisory only. Specific recommendations include:

- The applicant proposes to construct the artificial reef along the 50 to 80 foot contour approximately 60 feet in front of the existing marginal wharf. Site selection is the primary factor determining success of an artificial reef, and in this case, mitigation for 1.5 acres of EFH. The applicant's preferred site is not optimal for an artificial reef due to depths available for optimal kelp growth, slope stability, proximity to a busy, commercial dock facility, and access for monitoring. NMFS does not support this site and suggests the applicant investigate other areas, such as the head of Passage Canal (NW corner). If another site is not identified then NMFS does not support the artificial reef as mitigation.
- The applicant (ARRC) proposes to utilize up to 3500 yd.³ of scrap concrete to construct an artificial reef with a footprint of up to two acres. NMFS suggests, due to the experimental nature of this mitigation, that the project be reduced to a maximum of 2000 yd.³ of concrete with a maximum footprint of one acre.
- The applicant should ensure reef placement is stable, withstanding winter storm surges, and will not migrate down slope over time.
- All reef materials should be clean and free of any pollutants (PAH's, toxins,...etc.). No steel, except that integrated in the concrete.

If the artificial reef is not constructed for mitigation, alternative mitigation projects include:

- 1) Marine Debris Cleanup Project -- Gulf of Alaska Keepers-- Chris Pallister
- 2) The Whittier Artificial Reef Education Project: a K-12 curriculum unit on habitat restoration and mitigation -- Center for Alaska Coastal Studies -- Marilyn Sigman

NMFS is available to meet with the applicant, the Corps, local dive groups, and interested resource agencies to discuss details regarding artificial reef design and construction, as well as the other mitigation projects listed above. We are optimistic that such discussions could lead to a feasible mitigation plan to compensate for the habitat that would be affected by the proposed project.

Please note that under section 305(b)(4) of the Magnuson-Stevens Act, the 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. Brian Lance is the NMFS contact for this project, and can be reached at (907) 271-1301.

Sincerely,



Robert D. Mecum
Acting Administrator, Alaska Region

cc: *email
*ADNR/OPMP - nina_brudie@dnr.state.ak.us
*EPA - dean.heather@epa.gov
*USFWS - phil_brna@fws.gov
*Mark Ernest – citymanager@ci.whittier.ak.us
*ARRC – hotchkinb@akrr.com
*Serena.E.Sweet@poa02.usace.army.mil
*Records