U.S. FISH & WILDLIFE SERVICE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Anchorage Fish & Wildlife Field Office
605 West 4th Avenue, Room G-61
Anchorage, Alaska 99501-2249

IN REPLY REFER TO:

AFWFO

MAY 10 2005

Ms. Edrie Vinson
Federal Highway Administration
P.O. Box 21648
Juneau, Alaska 99802

Re: Knik Arm Crossing EIS-
Scoping Comments

Dear Ms. Vinson:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter of April 11, 2005, in which you request scoping comments on the Environmental Impact Statement (EIS) for the Knik Arm Crossing Project. Representatives from the Service have attended several meetings where we discussed scoping issues which we believe should be evaluated in the EIS.

The following is a summary of the issues of concern to the Service that we believe need to be addressed in the EIS:

1. *Cumulative impacts to the environment from the crossing project, Port of Anchorage expansion, and future development at Point McKenzie, as well as other reasonably foreseeable developments in the Municipality of Anchorage and the Matanuska-Susitna Borough-* In our view, cumulative impacts associated with the project is the most significant and difficult issue which must be addressed in the EIS. The scope and extent of the cumulative impact evaluation must be carefully considered, but in our opinion, cumulative impacts are most likely to be significant in Knik Arm, and the Matanuska-Susitna Borough.

2. *Mitigation-* Project impacts to Service trust resources, including anadromous fish, migratory birds, and wetlands should be avoided or minimized to the greatest practicable extent through proper consideration and selection of alternatives and designs. The process whereby this is accomplished should be described in detail in the EIS. Where impacts cannot be avoided or minimized, potential compensatory mitigation options should be described. The EIS should include discussion of the potential to mitigate cumulative impacts through some type of cooperative land use or watershed planning

effort in the Matanuska-Susitna Borough. In addition, the potential for mitigation banking should be investigated.

3. *Priority for alternatives which avoid and minimize impacts to fish and wildlife habitat and populations in Knik Arm-* Of particular concern to the Service is placement of fill in intertidal and subtidal areas of Knik Arm because of the potential effects on movement and migration of juvenile and adult anadromous fish. We believe that a pile supported crossing, rather than one which includes intertidal or subtidal fill, is likely to avoid and minimize impacts to anadromous fish to the greatest practicable extent. We are aware that consideration is being given to constructing shallow slopes and benches on intertidal fills to mimic natural, shallow littoral habitat. However, since the current state of scientific knowledge relative to anadromous fish use of Knik Arm is cursory and incomplete at best, it would be preferable to avoid potential adverse effects if possible.

4. *Potential project effects on movement and migration of juvenile and adult anadromous fish in Knik Arm-* The Service is concerned about the effects of this and other projects on movement and migration of both juvenile and adult anadromous fish in Knik Arm. We previously recommended (letter dated September 17, 2004, from A. Rappoport to H. Springer) that KABATA studies be designed and implemented to address five objectives. These are: entry timing of juvenile salmon into Knik Arm; duration of residence timing within Knik Arm; size and growth of juvenile salmon during early marine residence; distribution, by habitat type and area, and feeding intensity of juvenile salmon in Knik Arm; and availability of prey for juvenile salmon. Additionally, project effects on movement and predator avoidance by adult anadromous fish in Knik Arm should be evaluated.

   In a May 5, 2005, meeting on the Port of Anchorage expansion project, Dr. Jon Houghton of Pentec Environmental, the KABATA and Port of Anchorage fish study contractor, indicated that, in his opinion, "common generalizations of littoral habitat functions in southcentral Alaska, are partially or totally inapplicable in Knik Arm." Dr. Houghton speculated that typically recognized functions of littoral habitat for juvenile salmonids such as refuge from predators, and sources of abundant marine prey are not provided by Knik Arm shorelines because of water quality and sediment, and that juvenile salmonids are not as dependent on shorelines in Knik Arm as elsewhere. While it may be that littoral habitat may not function as a refuge for juveniles from predators because of turbid water, it does seem likely that littoral habitat provides refuge for juvenile salmon from strong tidal currents. Relative to marine prey, Dr. Houghton also stated that Knik Arm supports a low density and diversity of invertebrates and potential prey for higher consumers such as fish and birds. However, we are concerned that study methodologies may not adequately evaluate density and diversity of invertebrates or the importance of other food sources. Information contained in Moulton[1], indicate that adult terrestrial drift insects predominated the diet of all salmon species in July. It appears as if heavy feeding on drift insects demonstrated by juvenile salmon is probably a response to high turbidities which

[1] Moulton, L.L., 1997. Early marine residence, growth, and feeding by juvenile salmon in Northern Cook Inlet, Alaska. Alaska Fishery Research Bulletin. Vol. 4 No. 2, Winter.

reduce feeding efficiency and effect a near-surface orientation and reliance on food sources found near the surface.

In his presentation, Dr. Houghton also stated that concern about elimination of shallow water migration corridors for anadromous fish is greatly reduced by general absence of visual predators and that diversion of juvenile fish into deeper waters is unlikely to result in increased vulnerability to predation. However, he also stated that adult salmon may be more vulnerable to predation by belugas in deeper water. We caution against making broad conclusions about biological resources and project impacts without adequate scientific data. If these types of conclusions are postulated, the Service recommends that current fish studies be expanded to provide scientific evidence to support them. Specifically, the use of the littoral zone and deeper water habitats of Knik Arm by both juvenile and adult anadromous fish should be evaluated and compared. Additionally, migration patterns of adult anadromous fish and feeding behavior of Beluga whales should be studied so that the potential for the project to affect predation of anadromous fish by whales can be evaluated. If desired, the Service may be able to have our experts review study objectives and methods.

5. *Project effects on freshwater aquatic habitats-* The EIS should identify and describe potential direct and indirect project effects on freshwater aquatic habitats, including wetlands, streams and lakes, especially in the Matanuska-Susitna Borough.

6. *Effects on migratory birds and bird habitat in Knik Arm and in uplands and wetlands associated with the project-* The potential for bird strikes with the bridge should also be evaluated. In several meetings we recommended that use of intertidal and other habitats where fill or structures might be placed should be evaluated for use by migratory birds. A new report[2] prepared for Chugach Electric Association as well as a 1997 study[3] conducted on Elmendorf Air Force Base may provide some insight about bird migrations in Knik Arm relative to the proposed project.

7. *Potential for and effects of spills-* If the project is intended to support fuel pipelines, then the potential for spills should be assessed, along with the fate of spilled material, and potential effects of those spills on the environment in Cook Inlet.

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[2] Day, R.H., R.J. Ritchie, J.R. Rose, and G.V. Frost. 2005. Bird migration near Fire Island, Cook Inlet, Alaska, spring and fall 2004. Prepared for Chugach Electric Association by ABR Inc., Fairbanks, AK. 128 pp.

[3] Cooper, B.A., and J.R. Rose. 1997. Evaluation of radar to monitor bird movements at Elmendorf Air Force base, Alaska. Unpublished report prepared for U.S. Air Force, Elmendorf AFB, AK, by ABR Inc., Forest Grove, OR. 39 pp.

Thank you for the opportunity to provide comments and recommendations. If you have any questions regarding these recommendations, please contact project biologist Phil Brna at 271-2440, or by email at phil_brna@fws.gov.

Sincerely,

Denny R. Lassuy
Acting Field Supervisor

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