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

Please reply to:
AFWFO

JUN - 7 2004

Mr. David A. Martinson
Civil Works Planner
U.S. Army Corps of Engineers
CEPOA-EN-CW-PF
P.O. Box 6898
Elmendorf AFB, Alaska 99506-6898

Re: U.S. Fish and Wildlife Coordination Act Report
Chester Creek 206 Study, Draft Report and Environmental Assessment

Dear Mr. Martinson,

Thank you for providing the U.S. Fish and Wildlife Service (Service) the opportunity to comment on the January 2004 draft Chester Creek 206 Study, *Aquatic Ecosystem Restoration Draft Report and Environmental Assessment* (Report). The Service is pleased at the continued progress by the U.S. Army Corps of Engineers (Corps) in using Section 206 of the Water Resources Development Act (as amended) funding, in partnership with the Municipality of Anchorage (MOA), to restore fish passage at Westchester Lagoon.

The Service is continuing to administer a $300,000 grant from the National Fish and Wildlife Foundation (NFWF) as an additional funding component of the Westchester Lagoon Fish Passage Project, one of the many projects identified by the Corps of Engineers for the Chester Creek watershed. The Service will need to closely coordinate efforts with the Corps and MOA to ensure that as much of the funds are spent as possible by the end of calendar year 2004 on this or other projects on Chester Creek, as this grant expires December 31, 2004.

Enclosed is the Service's draft Coordination Act Report for the Westchester Lagoon Fish Passage phase of the current study. For comments on other restoration measures identified along the creek corridor, the Service refers you to our letter to John Burns, Environmental Resources Section of the Corps dated December 7, 2000 (also enclosed).

We commend the Corps for their willingness to work in partnership with the Service and others to develop and implement the Chester Creek Project. We will continue to offer technical assistance to you and other partners during further design, construction, and

DRAFT Fish and Wildlife Coordination Act Report
Westchester Lagoon Fish Passage Project

Project Summary

The Alaska District, U.S. Army Corps of Engineers (Corps), and the Municipality of Anchorage (non-federal sponsor) (MOA) are proposing to undertake an aquatic ecosystem restoration project on Chester Creek in Anchorage, Alaska. The proposed project is authorized under Section 206 of the Water Resources Development Act of 1996, P.L. 104-303. Section 206 authorizes the restoration of degraded aquatic ecosystem structure, function, and dynamic processes to a less degraded, more natural condition. The purpose of the restoration project is to improve passage for anadromous fish.

Urbanization, loss of streamside habitat, modification of spawning substrates, and most importantly, major obstructions to in-migration and out-migration access at the mouth of the creek have reduced the creek's salmon stocks almost to extinction. The current fish ladder at the lagoon severely hinders fish passage, allowing only a few fish to enter the creek each year.

The Corps, MOA, U.S. Fish and Wildlife Service (Service), Alaska Department of Fish and Game, and others have been discussing fish passage options at Westchester Lagoon for several years. The Service obtained a $300,000 Challenge grant from the National Fish and Wildlife Foundation in 2000 to help implement a fish passage project at this site. Additionally, the Service expended approximately $85,000 in Fish Passage program funds in 2002 in a grant to the MOA for initial study design. Over the past several years, a number of alternatives to improve fish passage at the mouth of Chester Creek/Westchester Lagoon have been considered. These have included: no action, removal of the dam/dike, construction of a fish ladder, construction of a flume, and construction of an open channel.

The Corps' recommended plan is to construct an open channel with a culvert under the railroad line to improve fish passage. Work would include relocating utilities, constructing a pedestrian bridge over the new open channel, relocation of a portion of the bike trail, and disposing of the excavated material in Westchester Lagoon to create bird habitat islands. An environmental assessment is integrated into the Corps' report.

The recommended plan maximizes ecological benefits and accomplishes the project purpose, while minimizing costs and negative environmental consequences. Work would (1) increase the number of adult salmon that are able to enter the stream; and (2) increase the survivability of juvenile out-migrating salmon. The proposed work would increase the habitat units (HU) for coho salmon from 385 HU to 17,508 HU. All necessary permits have been obtained to assure the project is in compliance with water quality standards and avoids any unnecessary impacts to fish and wildlife.

- Localized alteration of tidal hydrology by sediment disturbance during utility relocation.

Early in the assessment process for this project, a trestle-open channel option was evaluated. That option would maximize restoration of the creek to natural function and likely result in even greater numbers of salmon entering the creek at Westchester Lagoon. However cost and logistical constraints from involved landowners resulted in this alternative being dropped from further analysis in favor of a culvert option.

Recommended Management Practices for Project Construction and Operation

During further design and construction of the Westchester Fish Passage project, some basic prescripts and considerations should be followed. These should include:

Design

- Develop a formal maintenance plan as part of final design for the constructed channel and culvert.
- Identify responsibilities of the involved partners in the formal maintenance plan.
- Develop a monitoring plan for a minimum of 5 years duration after project completion to document the success of the project specifically for fish passage and flow conveyance.

Construction

- Maintain native vegetation wherever possible.
- Require an inspector to inspect and document on-site work and adherence to the design at least once every 2 days.
- Revegetate only with plants native to Alaska and appropriate to the site for restoration, with approval given by the U.S. Fish and Wildlife Service for the seed or plant mix.
- Delineate project footprint and access points when construction is initiated and prohibit any construction activities outside of this footprint/access area.
- Properly install and maintain silt fences or other erosion control methods.
- Prohibit storage and fueling of equipment in any wetlands.
- Use matting over wetland areas for equipment travel.
- No clearing, placement of fill or excavation shall occur between May 1 and July 15 in order to prevent the take of migratory birds and their nests in order to comply with the Migratory Bird Treaty Act (16 U.S.C. 703-712).
- In-water work shall not occur from May 15 through July 15, or other dates prescribed by the Alaska Department of Fish and Game in order to prevent disturbance or loss of migratory fish.
- During relocation of utilities or culvert construction, any excavated sediment that blocks or alters the tidal hydrology (i.e., creates linear water pools, etc.) shall be removed to maintain the pre-construction hydrology, except as changed by the presence of the new culvert itself.

United States Department of the Interior

FAXED 12/7/00

FISH AND WILDLIFE SERVICE
Ecological Services Anchorage
605 West 4th Avenue, Room 61
Anchorage, Alaska 99501-2249

WAES

December 7, 2000

Mr. John Burns
Environmental Resources Section
U.S. Army Corps of Engineers
P.O. Box 898
Anchorage, Alaska 99506-0898

Re: Chester Creek 206 Study, Aquatic Habitat Restoration Project, Draft Report

Dear Mr. Burns:

Thank you for providing the U.S. Fish and Wildlife Service (Service) the opportunity to comment on the draft *Chester Creek 206 Study, Aquatic Habitat Restoration Project* (Chester Creek Project). The Service is pleased that the U.S. Army Corps of Engineers (Corps) is using Section 206 of the Water Resources Development Act (as amended) funding in partnership with the Municipality of Anchorage to restore degraded aquatic ecosystems within the Chester Creek stream corridor. We particularly appreciate your willingness to work in interdisciplinary teams during the assessment, design and construction phases of the project. This is complementary to Section 206 guidance and the Corps' "Ecosystem Restoration - Supporting Policy Information" (Pamphlet No. 1165-2-502). Pamphlet No. 1165-2-502 states "successful restoration at the landscape level will depend on program coordination among those agencies responsible for management decisions on the separate ecosystem components. In addition, cooperative efforts which effectively combine Federal investments can potentially achieve greater ecosystem restoration benefits than individual agencies could achieve alone."

The Service is in the process of obligating funds to the Westchester Lagoon Fish Passage portion of the Chester Creek Project. These funds will likely be expended during the engineering and design phase of the project, in order to expedite the relocation of the utility lines and petroleum pipelines at the lagoon outlet. In addition, the Service is administering a $300,000 grant from the National Fish and Wildlife Foundation (NFWF) as an additional funding component of the Westchester Lagoon Fish Passage Project. We will need to closely coordinate restoration efforts with the Corps and the Municipality of Anchorage to ensure that all funds are spent according to the scopes of work in grant agreements, and the required $300,000 nonfederal match from other partners is secured for this portion of the project.

The field visit on Friday, November 18, 2000, was a great opportunity to bring resource agency representatives together to look at possible ways to restore the Chester Creek corridor. We are pleased that the Corps is looking at the potential to restore the creek to portions of its former

channel. The Service has adopted a watershed-based ecosystem approach to conservation and would like to stress the urgent need for restoration and enhancement of water quality and aquatic resources in this basin. Corps' restoration guidance (Pamphlet No. 1165-2-502) complements the ecosystem approach by emphasizing that "restoration projects should be conceived in a systems context, considering aquatic, wetland and terrestrial complexes, as appropriate, in order to improve their potential for long-term survival as self-sustaining, functioning systems."

Problems associated with the loss of fish and wildlife habitat, deleterious impacts to water quality and changes to the morphology of Chester Creek stem from urban development around the stream corridor. The Chester Creek stream corridor has undergone significant and deleterious impacts which have reduced or eliminated its natural functions. Those impacts are a result of channelization, construction which has impounded or constricted the channel, the loss of riparian vegetation, the placement of hard structure (e.g., riprap, gabions) within the channel, and the alteration of wetlands associated with the stream corridor. Rehabilitation and restoration of the stream corridor, including instream restoration, is essential in order to restore fish and wildlife habitat functions.

An analysis of the current stream condition as it relates to stability, potential and function is critical during the assessment phase of this project. The identification of a reference reach is essential in order to compare the natural stability of the stream with its existing condition at target restoration areas. An analysis of current environmental (baseline) conditions, in order to provide a basis for assessing the performance of the completed restoration, is recommended in both reference reaches and those reaches targeted or affected by rehabilitation/restoration practices. Those analyses should include a biological examination which may entail macroinvertebrate and fish population sampling, as well as a hydrologic and geomorphic analysis which characterizes the watershed.

The Alaska Department of Fish and Game (ADFG) has performed biological baseline monitoring on Chester Creek during fiscal year 2001, and those data should become available for review during the summer of 2001 (pers. comm. Muhlberg). While ADFG has performed some morphological analyses, additional assessment is needed in reaches where restoration practices will occur and should include the installation of monumented cross-sections to record changes in channel geometry.

During the design phase of the project (to follow the assessment phase), some basic prescripts should be followed. These would include:

a. Use only plants native to Alaska and appropriate for the site for the restoration.

b. Provide as much unfragmented forested buffer along the existing or restored channel as possible. Work with the Municipality of Anchorage to encourage the relocation of paved walkways as far away from the creek channel as possible, and to reduce fragmentation of the corridor.

c. Bioengineering techniques which reduce or eliminate the use of hard structure in

and along the channel, should be considered first and foremost in the design of the restoration project. Different reaches may necessitate different treatments for restoration. The *Streambank Revegetation and Protection, A Guide for Alaska*, (Muhlberg and Moore, 1998) is an excellent resource for this project and will aid the Corps in selecting restoration practices. The Service recommends the Corps design the project to incorporate a variety of restoration techniques (provided they are appropriate to the site) in order that the site may be used as an educational showcase for other potential restoration projects in the state.

d. We agree priority should be given to sites where restoration would have the greatest immediate impacts to fish and wildlife resources, especially fish access, such as the Westchester Lagoon outlet restoration project targeting fish passage, and the Seward Highway crossing. We do not agree with some of the rankings set forth in Table D of the Draft Plan, and suggest the Corps work with the resource agencies and other partners to reprioritize restoration in those areas where it will provide the greatest immediate benefit to fish and wildlife resources.

e. Overall, storm drains should be redirected outside the existing channel and through natural, vegetated filter strips in order to reduce the amount of sediment and contaminants entering surface waters from runoff. During our site visit on November 18, 2000, we discussed redirecting portions of the existing channel into relict channels (such as those found near C-Street and south of the Seward Highway), and restoring the former channel to wetlands that may be used as filters for stormwater runoff.

f. Culverts should be replaced with structures that do not impede channel flow and allow for the movement of both bedload and aquatic organisms. Bridged road crossings should be considered above culvert replacements. We do recognize that funding is a limiting factor. We recommend culverts, if not replaced by bridges, be replaced by bottomless, multi-cell box, or multi-cell pipe culverts. Any culverts that are replaced should be designed to maintain the natural channel stability and aid in the restoration of stream function. This would include minimizing scour, erosion or deposition at the culvert inlet, outlet and in the culvert barrel. The maintenance or enhancement of fish and wildlife passage and habitat should be prioritized in the road crossing design. Alternatives to culvert replacement should be addressed during the design phase of the project, and as assessment of the best method of accommodating flow (including flood flows) for the particular site conditions needs to be determined. Coordination with the Alaska Department of Transportation is imperative to this project in those areas where road and highway right-of-way may be affected by the restoration prescription.

g. The placement of large woody debris within the channel should be a component of the restoration prescription in order to add complexity within the channel and improve habitat for aquatic organisms.

We would not support the use of any restoration funds toward the Karluk Street cable relocation, or in association with any mitigation requirements set forth in any permits or leases associated with other development projects.

We commend the Corps for their willingness to work in partnership with the Service and others to develop and implement the Chester Creek Project. We would like to offer technical assistance to you and other partners during the assessment, design, construction, and monitoring phases of the project. The Service representative for this project is Anita Goetz, of my staff, and she may be reached at 907/271-1798 (email: anita_goetz@fws.gov) if you have questions or need additional information.

Sincerely,

Ann Rappoport
Field Supervisor

cc: Gay Muhlberg, ADFG
Dan Vos, NMFS
Thede Tobish, Municipality of Anchorage
Dick Dworsky, Municipality of Anchorage

References:

Muhlberg, G. Alaska Department of Fish and Game. Personal communication. November 14, 2000.

Muhlberg, G. A. and N. J. Moore. 1998. Streambank Revegetation and Protection, a guide for Alaska. Alaska Department of Fish and Game. Technical Report No. 98-3.