



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

*National Marine Fisheries Service*

*P.O. Box 21668*

*Juneau, Alaska 99802-1668*

March 17, 2003

Colonel Steven T. Perrenot  
District Engineer  
U.S. Army Corps of Engineers  
Alaska District  
P.O. Box 898  
Anchorage, Alaska 99506-0898

Re: 4-2001-1030  
Glacier Creek 10

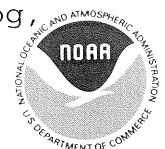
Attn: Robin Leighty

Dear Colonel Perrenot:

The National Marine Fisheries Service (NMFS) has reviewed the above referenced proposal by the Anchorage Water and Wastewater Utility. The proposed project involves discharge of approximately 15,560 cubic yards of fill into approximately 4.17 acres of waters of the United States (3.21 acres of forested wetlands and 0.96 acre of stream channel) for the construction of a 9,720-foot long, 16 inch diameter buried water transmission main and pressure reducing vault along the route. The alignment would cross approximately 2,230 feet of forested wetlands and 730 feet of two streams (Glacier and Tiny Creeks). Dredged and fill material would be stockpiled along the corridor (i.e., in the wetlands). Glacier and Tiny Creeks are Essential Fish Habitat (EFH) for salmon. The proposed action is identified as the Preferred Alternative, also referred to as Alternative B, Looped Transmission Main, Crow Creek Road Route, in the Draft Environmental Assessment (DEA).

The U.S. Army Corps of Engineers (Corps) has made a determination that the project may adversely affect EFH due to the crossing of Glacier Creek by diversion and trench method and Tiny Creek by diversion and pumping. NMFS agrees with this determination. The Magnuson-Stevens Fishery Conservation and Management Act requires NMFS to make conservation recommendations regarding any federal action that would adversely affect EFH. The construction and operation of the proposed project would adversely affect EFH and anadromous fish if necessary conservation measures are not followed.

Glacier Creek and Tiny Creek provide EFH for migrating, spawning, rearing, and/or over-wintering chinook salmon (*Onchorynchus tshawytscha*), coho salmon (*Onchorynchus kisutch*), pink salmon (*Onchorynchus gorbuscha*) and chum salmon (*Onchorynchus keta*). Glacier Creek is listed as anadromous (ADF&G anadromous catalog,



Seward D-6). While not listed in the catalog, Tiny Creek is hydrologically connected to California Creek which is listed as anadromous for Chinook, Coho, and Pink salmon. Juvenile coho have been observed in Tiny Creek and it is likely that the stream provides rearing habitat. The wetlands in the project area have extensive pockets of standing water for rearing of juvenile salmon and are an integral part of healthy productive fish habitat. Hydrologic functions performed by these wetlands are short and long term water storage. These wetlands buffer peak flows and attenuate low flows into the streams. The wetlands also remove pollutants from water flowing off fill pads, paving, roads and buildings, which can severely impact incubating and juvenile salmon.

NMFS' primary concern is the crossing of Glacier Creek using temporary stream diversion. Bridging or Horizontal Directional Drilling (HDD), from a habitat perspective, are the preferred methods for crossing anadromous fish streams. Bridging or HDD would allow the applicant to cross the stream with little if any effect on EFH. We offer the following recommendations pursuant to section 305(b)(4)(A) of the Magnuson-Stevens Fishery Conservation and Management Act.

#### **EFH Conservation Recommendations**

1. Phase the proposed project. Construct the portion of the new waterline from the existing main, along Alaska Highway, and up High Tower Road to Girdwood Elementary School. Defer construction of the looped portion (water supply for new development) until a more detailed analysis of alternatives is completed in cooperation with interested resource agencies.

*Rationale - Construction of this initial phase of the project would not require any permits and the applicant could proceed with the project now. Further, it would meet the immediate need of a reliable water supply to the school and would have no adverse effects to EFH. The Corps Public Notice and DEA do not demonstrate that the Preferred Alternative minimizes impacts to EFH and wetlands. Phasing the project would allow time for a more detailed analysis of alternatives for the looped portion of the waterline to reduce impacts to wetlands and EFH.*

2. Consider the pedestrian bridge alternative for the north Glacier Creek crossing. The applicant should develop feasibility and cost estimates.

*Rationale - Glacier Creek is an anadromous fish stream. A bridge for the water line would require no in-water work and presents the least impact to EFH while allowing access by AWWU.*

3. If the pedestrian bridge alternative proves unworkable, use HDD for the north Glacier Creek crossing.

*Rationale - Glacier Creek is an anadromous fish stream. Water flow in Glacier Creek is year-round; flow is augmented by glacier and snow melt, and a large wetland complex. The project area is spawning and/or rearing habitat for coho, king, and chum salmon as listed in the ADF&G anadromous fish stream catalog. De-watering the stream runs a risk of impacting these fish resources and EFH. HDD is viable and practicable alternative.*

4. If, after attempting HDD, the technique proves ineffective, revert to the stream diversion and trench method outlined in the DEA. The DEA further states the preferred in-water work window is during a low-flow period, mid to late November or April, outside the normal ADF&G work window for southcentral Alaska of May 15 to July 15. NMFS understands the need to work outside the traditional in-water work window due to the heavy flows in Glacier Creek, and if this method is used, the work should be done in April.

*Rationale - While juvenile salmon may be present in April, this period would avoid the November period when eggs are in the gravel.*

5. If the stream diversion and trench method is used, minimize time spent doing in-stream work and working in the flood plain of Glacier and Tiny Creeks.

*Rationale - More time spent in the stream and flood plain increases the probability of sedimentation controls being compromised with damage to EFH.*

6. The applicant should attempt to coordinate the work with other utility and development projects in the area.

*Rationale - A good way to minimize disturbance to fish habitat is to reduce the number of times a wetland is impacted and the number of times in-water work is done in*

*fish streams. Coordination with other projects in the area and long-range planning will help to meet this goal.*

7. Use fish screens on pumps for all water sources classified as anadromous (e.g., Glacier and Tiny Creeks).

*Rationale - Glacier and Tiny Creek are rearing habitat for juvenile salmonids that could be injured or killed by intake pumps. Screens will prevent juvenile fish from entering the pump hose.*

8. Pre-stage hazardous spill response equipment to protect biologically important sites such as anadromous fish streams, tributaries, and associated wetlands. Fueling and handling of other hazardous substances should be restricted to work pads no closer than 100 feet from streams, preferably outside the flood plain.

*Rationale - This is an environmentally sensitive area. Should a spill occur, timing for response could be critical. A hazardous material spill resulting from the proposed project would increase the vulnerability of fish to contamination, injury, and mortality because of the continuity of wetlands and fish streams, anadromous fish, shallow waters, and local currents which tend to disperse pollutants throughout the water column.*

9. Develop a storm water mitigation plan to prevent channeling water directly into Glacier and Tiny Creeks. This may be accomplished by maintenance of drainage swales along the perimeter of any fill and by directing drainage away from streams.

*Rationale - Non-point source pollution can have deleterious effects on salmonids, particularly growth in juveniles. Glacier and Tiny Creeks are spawning and/or rearing habitat for coho, chinook, and chum salmon.*

10. Minimize fill and develop a construction erosion control plan.

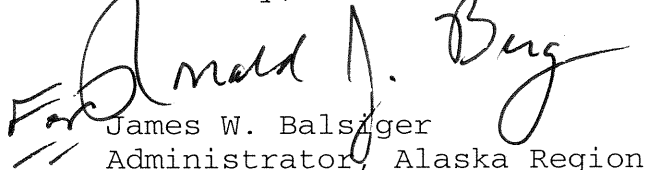
*Rationale - Sediment associated with erosion can smother spawning gravels and destroy rearing habitat for salmonids. Contiguous surrounding vegetation serves to filter runoff, buffer peak flows, and trap sediments before reaching the main stream channel.*

11. All standards and mitigation set by the Alaska Department of Natural Resources (ADNR) and the Alaska Department of Fish and Game (ADF&G) in the issuance of any related permits should be adopted as part of the project plan approved by the AWWU and ultimately the Corps of Engineers. The project should follow ADF&G temporary stream diversion guidelines if stream diversion is used for stream crossings. Monitoring should be initiated at startup and repeated periodically throughout the project to ensure compliance with permit standards. An independent trained inspector should be on site at all times while working in the flood plain of Glacier and Tiny Creeks. The inspector should have shutdown authority and operations should be suspended or modified if violations occur. Resource agencies should be contacted if violations and/or a shutdown occur. A site restoration plan including revegetation and clean up should be provided and coordinated with regulatory and resource agencies prior to construction.

*Rationale - ADNR and ADF&G will provide the permitting oversight for in-water work and restoration/revegetation. On-site monitoring will increase the likelihood that Best Management Practices set out in the project design are carried through in the field by contractors.*

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 recommendations. If the Corps does not make a decision within 30 days of receiving NMFS EFH Conservation Recommendations, 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,

  
James W. Balsiger  
Administrator, Alaska Region

cc: USFWS, EPA, ADGC, ADFG, ADEC - Anchorage

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