UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

August 8, 2006

Kris Benson
Project Environmental Coordinator
Alaska Department of Transportation and Public Facilities
6860 Glacier Highway
Juneau, AK 99801

Dear Ms. Benson:

The National Marine Fisheries Service (NMFS) has reviewed your recent Boulder Creek mitigation letter. NMFS has jurisdiction for living marine resources under the Fish and Wildlife Coordination Act, Magnuson-Stevens Fishery Conservation and Management Act, Marine Mammal Protection Act and Endangered Species Act. Collectively, these laws require NMFS to provide comments and consultation on the environmental impacts of Federal actions on wetlands and streams that support anadromous fish, nearshore and marine habitats that support commercial and recreational fish species, and marine mammals and federally listed threatened and endangered species. We have the following comments on the mitigation letter.

The proposed reroute of Government Creek into the Boulder Creek channel will result in an anadromous fish passage barrier at the confluence of the two streams. As mitigation for the loss of approximately 1,500 feet of coho rearing habitat in Boulder Creek, ADOT is proposing to construct a series of side channel between 50 and 500 feet long to provide habitat for juvenile coho. The proposed channels will be excavated into the bedrock adjacent to the realigned Government Creek. The channels are proposed to be connected to Government Creek at the downstream end. Flow is only expected to occur in the side channel during flood flow events that exceed the bank full capacity of Government Creek. "(A) small amount of flow may result during low flow conditions as a result of seepage from the cut slope."

As you indicate in your letter, Katharine Miller of the NMFS Habitat Conservation Division met with you on 20 July 2006 to discuss your draft mitigation plans. At that meeting, she expressed concern that in the absence of other water inflow (e.g. groundwater recharge, seepage from the adjacent stream) the proposed bedrock channels may reach excessive temperatures or may not be sufficiently oxygenated to provide adequate habitat for juvenile salmonids. The Government Creek Side Channel Habitat Features document states that "The channel need not maintain continuous surface flow through low water events so long as pools remain and maintain adequate water quality, primarily low temperatures."

NMFS is concerned that emphasizing low stream temperatures alone may not ensure adequate dissolved oxygen for juvenile coho in the proposed channels. While it is true that the lower the stream temperature the higher the dissolved oxygen potential, low temperatures alone may not

suffice without sufficient water circulation. Optimal habitat for coho requires dissolved oxygen concentrations to be near saturation. NMFS is concerned that the proposed channels may suffer low dissolved oxygen concentrations during unseasonably warm periods (such as occurred in 2004). Because of the length of the proposed channels, connecting the channels to Government Creek only at the downstream end, even with the proposed invert and channel elevation, may not provide sufficient backflow of water through the length of the channel to keep it sufficiently oxygenated.

Natural side channel habitat, such as that located in the reference reach of Government Creek, has some freshwater inflow even during low flow periods. NMFS recommends that the design for the proposed mitigation side channels include the gravel filled upstream connection to Government Creek described on page 3 of the Government Creek Side Channel Habitat Features document.

Please contact Katharine Miller at (907)586-7643 if you have any questions or for further coordination.

Sincerely,

Robert Mecum

Robert D. Mecum
Acting Administrator, Alaska Region

cc: Al Ott, OHMP, Fairbanks*
    Van Sundberg, DOT, Juneau*
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2