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

January 30, 2009

Colonel Kevin J. Wilson
District Engineer
U.S. Army Corps of Engineers
P.O. Box 6898
Anchorage, Alaska 99506-0898

Re: POA-2006-1811-M1
Auke Lake

Attn: Richard Jackson

Dear Colonel Wilson:

The National Marine Fisheries Service (NMFS) has reviewed the above referenced United States Army Corps of Engineers (USACE) public notice for the permit application submitted by Mr. Dick Somerville, PND Engineers, Inc., agent for the City and Borough of Juneau (CBJ). The project site is located within Section 23, T. 40 S., R. 65 E., Copper River Meridian; United States Geological Survey Quadrangle Map Juneau B-2 NW; Latitude 58.382,550° N., Longitude 134.632,382° W.; at the Auke Lake Wayside just south of Fritz Cove Road on Glacier Highway, in Juneau, Alaska.

The applicant's stated purpose is to construct a boat launch ramp facility with staging, maneuvering, and parking space to provide the residents of Juneau with additional access to Auke Lake. The applicant proposes to place fill into waters of the United States in conjunction with construction of the boat launch ramp. Approximately 1230 cubic yards (cy) of fill would be used, including 700 cy of clean shot rock, 300 cy of rip rap, 100 cy of small crushed rock, and 130 cy of precast concrete ramp planks. The fill would cover approximately 0.11 acres below ordinary high water.

Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with NMFS on all actions that may adversely affect Essential Fish Habitat (EFH). NMFS is required to make EFH Conservation Recommendations, which may include measures to avoid, minimize, mitigate or otherwise offset adverse effects.

EFH within the project area would be adversely affected if the proposed project is implemented as currently designed. Auke Creek (111-40-10420), Auke Lake (-0010), and Auke Lake's eight tributaries (-3003, -4001, -2012, -2015, -2010, -2008, -2006, and -2002) are all mapped in the State of Alaska Anadromous Stream Catalogue (Johnson & Dqaigneault 2008). These waters provide EFH that is important for the migration, holding, spawning and/or rearing of the following anadromous fish: sockeye, coho, pink and chum salmon; steelhead and cutthroat trout; and Dolly Varden char (Johnson & Dqaigneault 2008). All sockeye salmon entering Auke Lake to spawn in the lake or its tributaries use nearshore habitat at the site of the proposed project for critical pre-spawning staging (Bonita Nelson, pers. comm.). Field surveys conducted by NMFS Auke Bay Lab (ABL) personnel in the summer of 2007 documented additional salmon rearing

habitat along the shores of Auke Lake near the project (Bonita Nelson, pers. comm.). All fish species found in the lake use the proposed project area during various life history stages.

Over the past several years, NMFS has worked with and provided numerous comments and recommendations to the USACE and the applicant on the proposed boat ramp and a separate project to improve and expand the recreational trail around Auke Lake. Portions of each project impact the same parts of the lake and Auke Creek, and would have adverse effects on EFH. NMFS Alaska Regional Office and ABL agree with the applicant that "the environmental sustainability of the lake [is] the most important issue." (NMFS April 2007 letter, joint NMFS Alaska Regional Office and ABL June 2007 letter, and ABL December 2008 letters, enclosed).

Sockeye Salmon

Placing fill material in the proposed project area would be detrimental to the entire sockeye salmon population in Auke Lake for four reasons: 1. Many fish hold in this area before moving into their spawning habitat; 2. Some fish spawn in this area; 3. Additional access to Auke Lake by motorized watercraft is likely to result in further impairment to water quality; and 4. The shore edges provide rearing habitat for many fish species, including sockeye, and placing fill along the shoreline would further limit rearing habitat in a lake already impacted by development, hydrocarbons, and other factors.

NMFS' predecessor agency, the United States Bureau of Commercial Fisheries, began salmon research at Auke lake in 1961 (Taylor 2007). We have collected over 45 years of data on salmonid populations at each life history stage, as well as water quality and limnology data, for Auke Lake and Auke Creek. Our April 2007 letter to Mark Matsil, Director of Juneau Parks and Recreation, summarized recent research on sockeye salmon, which documents a population decline in Auke Lake. During the course of that research, scientists learned that adult sockeye "hold" and mill for up to six weeks along the shoreline between the University of Alaska campus beachfront and the float planes before moving to their spawning sites. During this six week period, the fish are acclimating to fresh water and preparing physiologically for spawning. The main holding area is near the highway and float planes, i.e. within the proposed boat ramp project area. While most of the holding sockeye eventually spawned in several of the Lake Creek tributaries, a significant portion spawned within the proposed boat ramp project area.

The December 16, 2008, letter from NMFS' ABL to the USACE concerning the proposed boat ramp project raised a number of EFH and water quality concerns. ABL has interest in the proposed project for several reasons. The lab holds the senior water rights to withdrawals from the lake's outlet. Auke Lake is the source of fresh non-chlorinated water used at the ABL laboratory facilities in nearby Auke Bay and at the ABL hatchery on Auke Creek, and this clean water is necessary for the health of fish and other organisms grown at or migrating through the two research facilities. The ABL, Alaska Department of Fish and Game (ADF&G), and the University of Alaska Fairbanks School of Fisheries and Ocean Sciences are partners in long term scientific studies that yield valuable data on sockeye and other fish populations in Auke Lake and Creek. The ABL is concerned about potential impacts that could adversely affect the already declining sockeye salmon population.

Water Quality

The ABL needs to maintain the security and integrity of two intake structures in the lake and two waterlines that provide high quality water to the lab and the creek research station. The ABL and its research partners are also concerned about the impacts on EFH in Auke Lake during and after construction of the proposed project. In-water work is bound to generate sedimentation when the old boat ramp in Auke Creek is decommissioned and when the new boat ramp is built. Sedimentation affects water quality at the waterline intakes and can also damage EFH. The applicant has not stated any plans to confine sediment.

Hydrocarbon Pollution

The new boat ramp will be a pathway for the introduction of increased levels of hydrocarbon pollutants into Auke Lake. The ABL staff have monitored the effects of hydrocarbons from motorized vessel use in Auke Lake and recently published a report on the effects of these pollutants (Rice et al. 2007). Increased motorized traffic in Auke Lake has resulted in increased levels of hydrocarbons in the lake waters, approaching levels that cause reproductive harm to developing fish embryos and reduce the productivity of Auke Lake (Rice et al. 2007). Increased boating activity in Auke Lake resulting from use of the proposed boat launch ramp facility will further increase the amount of hydrocarbons in the lake. Elevated levels of hydrocarbons can cause reproductive harm to developing fish embryos (Rice et al. 2007).

In accordance with Section 305(b)(4)(A) of the Magnuson-Stevens Act, NMFS offers the following EFH Conservation Recommendations:

1. Redesign the proposed boat ramp to better minimize impacts to EFH. The ramp, as proposed, exceeds ADF&G's minimums for ramp slope, lane width, and ramp length. Given the environmental sensitivity and importance of the proposed project site, and the associated impacts on EFH, there is no justification for building the ramp beyond the minimum safe dimensions.

   The width and length of the ramp should be as small as possible, yet safely accommodate the existing allowed use (motorized boats up to 16' in length). The proposed ramp width of 14' exceeds the ADF&G Sport Fish minimum recommendation by two feet. ADF&G's boat ramp facility guide recommends a minimum width of 12' and states that, "In general, the longer the ramp and the larger the boat, the wider the lanes need to be." CBJ's ordinance #2008-26(b) restricts motorized vessels in Auke Lake to 16' or less, and these craft are currently launched from a much smaller rudimentary "ramp". Building a ramp to accommodate motorized watercrafts that exceed CBJ's legal maximum length is not justifiable given the environmental costs associated with fill at the proposed project site.

   Similarly, the shoulder width could possibly be reduced to 0, and the ramp could be shortened to 4' below low water by constructing a cut bank and pulling the ramp landward. The ramp slope could be increased to 16%, especially for the portion below

OHW (ordinary high water), while the upper portion could remain at the flatter 13% slope (jack-knife ramp) or be increased up to 16% and still remain within the ADF&G guidance.

2. Condition the permit to require the applicant to:

    a. Restrict motorized use in Auke Lake to four-stroke engines or fuel-injected two-stroke engines, because increased access to Auke Lake by motorized craft will result in additional hydrocarbon pollution of the lake's waters. The applicant, CBJ, could implement this special condition by amending their existing ordinance #2008-26(b), "An Ordinance Amending the boundaries Limiting Motorized Vessel Use on Auke Lake". A similar restriction has been successfully implemented on other sensitive Alaskan waters, such as the Kenai River, to protect water quality. The United States Environmental Protection Agency has tested and concluded that older two-stroke engines contribute 12 to 20 times more unburned fuel into the environment than a four-stroke engine of a similar size.

    b. Close the existing ramp into Auke Creek mouth to eliminate sedimentation from the old ramp site and replace the ramp in new location.

    c. Use rip rap and concrete materials to minimize sediment runoff into Auke Lake.

    d. Restore riparian vegetation at the old ramp site by prohibiting vehicular access, planting the stream bank with native emergent wetland vegetation, and planting the upland portion of the old ramp with native upland vegetation.

    e. Hydroseed any slopes that are disturbed during construction with native seeds and plant native upland trees and shrubs where appropriate.

    f. Prohibit in-water work between April 1st and May 15th to protect outmigrating smolt that use nearshore habitat before entering Auke Creek.

    g. Minimize sedimentation input during construction by utilizing silt curtains.

Under section 305(b)(4)(B) of the Magnuson-Stevens Act the Corps is required to respond to NMFS EFH Conservation Recommendations in writing within 30 days. If the Corps will not make a decision within 30 days the Corps should provide NMFS with a letter within 30 days to that effect and indicate when a full response will be provided.

In the meantime, NMFS and the United States Fish and Wildlife Service have scheduled an interagency meeting with the agent in February to discuss modifying the boat ramp design and size. NMFS is requesting an additional 30 day time extension beyond the current January 30 end of comment period to enable the parties to discuss and hopefully resolve outstanding issues regarding the project's effects on EFH.

If you have any questions regarding our conservation recommendations for this project, please contact Chiska Derr at 907-586-7345 or Chiska.derr@noaa.gov.

Sincerely,

Robert D. Mecum
Acting Administrator, Alaska Region

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Enclosures:

April 27, 2007, letter from Susan Walker, Alaska Region, NMFS Habitat Conservation Division, to Mark Matsil, Juneau Parks and Recreation.

June 18, 2007, letter from Robert Mechum, Acting Administrator, Alaska Region NMFS, and Phil Mundy, Director, Auke Bay Laboratory, to Rod Swope, Manager, City and Borough of Juneau.

References:

Johnson, J. and M. Dqaigneault. 2008. Catalogue of waters important for spawning, rearing, or migration of anadromous fishes—Southeastern Region. Effective June 2, 2008. Alaska Department of Fish and Game, Special Publication No. 08-06, Anchorage.

Kanouse, K. 2009. Personal communication. Habitat Biologist, Alaska Department of Fish and Game, Habitat Division, Juneau, Alaska.

Nelson, B. 2007. Personal communication. Fisheries Biologist, Auke Bay Lab. IN: April 27, 2007 letter from Susan Walker, NMFS HCD to Mark Matsil, Juneau Parks and Recreation.

Rice, S.G. 2007. Seasonal increases in polycyclic aromatic hydrocarbons related to two-stroke engine use in a small Alaskan lake. Journal of Lake and Reservoir Management, Volume 55. 25p.

Taylor, S.G. 2007. Auke Creek Weir 2006 Annual Report, Operations, Fish Counts, and Historical Summaries. Unpublished Report. National Marine Fisheries Service, Auke Bay Fisheries Laboratory, 11305 Glacier Highway, Juneau, Alaska 99801. 28p.