



United States Department of the Interior
FISH AND WILDLIFE SERVICE
Juneau Fish & Wildlife Field Office
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October 7, 2011

Duff W. Mitchell
Business Manager
Juneau Hydropower Inc.
P.O. Box 22775
Juneau, AK 99802

Re: FERC P-13563 Sweetheart Lake Hydroelectric Project

Dear Mr. Mitchell:

The U. S. Fish and Wildlife Service has reviewed the Scoping Document 1 (SD1) for the Sweetheart Lake Hydroelectric Project. The project area is located approximately 35 miles southeast of Juneau, Alaska. The proposed project would include a concrete and rock-faced dam approximately 500 feet long and 90 feet high at the outlet of lower Sweetheart Lake. This dam would create a 1,635 acre impoundment. Water would be conveyed 1,650 feet through a 9-foot diameter penstock to a 30-megawatt powerhouse. A bypass reach would be created in Sweetheart Creek (Anadromous Waters Catalog #111-35-10200, map attached) as the tailrace will return flows downstream of an anadromous fish barrier on Sweetheart Creek. Transmission lines would consist of a combination of an overhead and submarine line, either a 0.4-mile long overhead transmission line from the powerhouse to a new dock on the east shore of Gilbert Bay, 1.5-mile long submarine transmission line across Gilbert Bay, and a 5.5-mile overland transmission line along the west shore of Port Snettisham; or a 0.4-mile long overhead transmission line from the powerhouse to a new dock on the east shore of Gilbert Bay and an 8-mile long submarine transmission line across Gilbert Bay to Port Snettisham.

Fish and Wildlife Service comments were provided during the agency scoping meeting held at the Juneau Ranger District Office on September 7, 2011. Our comments can be found in the meeting transcript under FERC (Federal Energy Regulatory Commission) P-13563 issuance 20110907-4012. Additional comments can also be found in our October 25, 2010 comment letter to FERC on Juneau Hydropower's (JHI) Notice of Intent to File License Application and Pre-Application Document for the proposed Sweetheart Lake hydroelectric project (FERC No. 13563-001).

The Fish and Wildlife Service is particularly interested in project designs that would minimize impacts to anadromous fish and migratory birds. One way to minimize impacts to anadromous fish is to return project flows to the stream at or above the existing limit of


anadromous fish access. The project, as currently designed, would return flows below the existing anadromous fish barrier, potentially eliminating anadromous fish habitat. We request that you evaluate alternatives that would maintain flows through the entire anadromous reach, as a way to minimize impacts to salmon, trout, and char that spawn in this reach.

We are also concerned that salmon smolt migrating from Sweetheart Lake would be lost by passage through the proposed hydropower facility. We understand that JHI intends to install a system to safely transport smolt through the system to saltwater. We are not aware of any such systems at Alaskan hydropower facilities. Evidence of successful deployment of smolt transport systems elsewhere should be provided for any such system proposed for Sweetheart Creek, to help us evaluate the suitability of the technology.

Transmission lines can present electrocution and collision hazards to migratory birds. Factors such as location and design interact to make some lines more hazardous than others. These factors are considered in detail in *Suggested Practices for Avian Protection on Powerlines: The State of the Art in 2006* (Avian Power Line Interaction Committee, 2006). We recommend that transmission lines for the Sweetheart Hydropower project be designed in compliance with the recommendations this reference, to minimize impacts of the project on birds.

Thank you for the opportunity to review SD1. The primary contact for the U.S. Fish and Wildlife Service will be Richard Enriquez, Conservation Planning Assistance Biologist, 3000 Vintage Blvd. #201, Juneau, AK 99801 (email: Richard_Enriquez@fws.gov).

Sincerely,


for Bill Hanson,
Field Supervisor

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