United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Southern Alaska Fish and Wildlife Field Office
Anchorage Fish and Wildlife Conservation Office
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Anchorage, Alaska 99507

In Reply Refer to:
FWS/R7/SAFWFO

Jennifer Holstrom
Regulatory Compliance Manager
Ketchikan Public Utilities
1065 Fair Street, Ketchikan, AK 99901

Subject: Study requests and comments on the Pre-Application Document for the Ketchikan Lakes Hydroelectric Project (P-420), Service File Number 2025- 0127165

Dear Jennifer Holstrom:

Thank you for your Notice of Intent and Pre-Application Document (PAD) for the Ketchikan Lakes Hydroelectric Project (Project; Federal Energy Regulatory Commission [FERC] project number 420), which were filed with FERC and shared with the U.S. Fish and Wildlife Service (Service) on March 31, 2025. The existing FERC license expires on July 1, 2030, and the City of Ketchikan, as represented by Ketchikan Public Utilities (KPU), is in the initial phases of relicensing the Project.

The Project is located near the city of Ketchikan, Alaska, and utilizes water from Upper and Lower Ketchikan Lakes and Granite Basin Creek. The existing project facilities are described in the PAD (page 17), and consist of:

1. a 1,130-foot-long rockfill dam at the outlet of Ketchikan Lakes;
2. a concrete diversion dam on Granite Basin Creek;
3. Fawn Lake, a forebay that discharges into an unnamed tributary to Deer Creek, a tributary of Ketchikan Creek;
4. the Ketchikan Lakes to Fawn Lake conveyance system consisting of a short tunnel section, two 1,800-foot-long above ground pipelines, and a 1,127-foot-long tunnel terminating in Fawn Lake below normal low water level;
5. the Granite Basin Creek diversion to Fawn Lake conveyance system, consisting of a 1,170-foot-long tunnel discharging to a 150-foot-long natural channel that empties into Fawn Lake;
6. a 3,473-foot-long power tunnel with a concrete plug penetrated by three, 36-inch diameter, ductile-iron-pipe penstocks connecting the end of the tunnel to the powerhouse;
7. a concrete powerhouse containing three horizontal Francis turbines directly connected to three 1,400 kW generators, for a total rated capacity of 4,200 kW; and
8. appurtenant facilities.

KPU is considering one infrastructural change, one operational change, and one administrative change to the Project. The proposed changes to Project facilities and operations are described in the PAD (page 40), and consist of the addition of a low-level outlet for dam safety purposes, refining license Article 407 so that it only applies to down-ramping, and defining new mutually agreeable notification requirements for when flows fall below the required minimum flow releases, or when the defined ramping rates are exceeded.

We offer the following comments after reviewing the PAD, and are submitting study requests (enclosed) to understand potential impacts to Service trust resources.

Stream Habitat Discrepancies

While the PAD details stream habitat information collected during the previous relicensing of the Project, there are some discrepancies with other commonly used datasets that present challenges for understanding the impacts of the project on fish and aquatic habitat.

The PAD presents aquatic conditions in the Project area by delineated reaches, with Ketchikan Creek divided into six reaches and Granite Basin Creek divided into three reaches. Details for each Project reach are available in the PAD (pages 76-80). Reach K1 is the lowest reach of Ketchikan Creek, and it empties into the Tongass Narrows. Reach K6 is the highest reach of Ketchikan Creek and is the outlet of Lower Ketchikan Lake. Reaches K1 and K2 are below the project tailrace and are the only two reaches subject to license Articles 405, 406 and 407, which specify minimum instream flow requirements, minimum hatchery flows, and ramping rates, respectively. Reaches K3 through K6 are above the tailrace and are not hydraulically regulated for minimum flow requirements and ramping rates.

Surveys for the previous Project license identified an anadromous fish migration barrier in reach K3 (PAD page 79). However, the Anadromous Waters Catalog (AWC) maps anadromy higher in Ketchikan Creek, ending in reach K5 (Giefer and Evers 2025, pages 44 and 569). Furthermore, Tongass National Forest Stream Lines (data available at https://gis.data.alaska.gov/datasets/usfs::tongass-national-forest-stream-lines/about) also disagree with the Project's extent of fish habitat. These stream lines are part of a hydrography dataset maintained by the U.S. Forest Service that was developed to both inform the National Hydrography Dataset (NHD) and address the limitations of the NHD in southeast Alaska. The Tongass National Forest Stream Lines indicate that Class I (anadromous fish habitat) and Class II (resident fish habitat) stream reaches extend beyond what is described in the PAD.

The PAD acknowledges fish habitat above the barrier in reach K3 (PAD page 81), but the discrepancies present challenges for understanding project related impacts on fish and aquatic habitat. We propose a stream mapping study (enclosed) with methods that are routinely used in southeast Alaska in order to resolve the discrepancies and allow for informed discussions on project impacts and future protection, mitigation, and enhancement (PME) measures.

Addition of a Low-level Outlet

Currently there is no low-level outlet for the Project, and having one would improve safety as it would help prevent uncontrolled spill events. The PAD describes current flood procedures for

the project in the absence of reservoir control valves on page 33. A new valve would be added on one of the penstocks just below the Ketchikan Lakes dam, and it would release water from Ketchikan Lakes into Ketchikan Creek in a controlled fashion.

The PAD indicates that spill events are infrequent, and states: "The addition of a low-level outlet would reduce the magnitude, duration, and frequency of spill events; however, there is no indication that this would be considered a negative impact given the infrequent occurrence of spill events currently" (PAD page 171).

There is no instream flow requirement for reaches above the tailrace, including reaches K3 through K6, and spill events already occur infrequently. However, these reaches still provide fish habitat, and understanding how project operations and proposed changes impact habitat will inform discussions for future PME measures.

We request a study to review available information on projected future flows as well as the magnitude, duration, timing, and frequency of previous spill events in order to understand how those spills influenced aquatic habitat, and then how regulating future spills with the new low-level outlet might change these conditions.

Modification of Ramping Rate Requirements per Article 407

Currently, ramping rate requirements in license Article 407 apply to both down-ramping and up-ramping. KPU requests refining license Article 407 so that it only applies to down-ramping since it is most associated with environmental impacts (PAD page 40). While down-ramping rates can have impacts like fish stranding, up-ramping can also have adverse impacts depending on the timing, magnitude, and frequency of the increased flows.

We request a study (enclosed) to review available information in order to approximate what a range of up-ramping conditions could be if restrictions were not included in the license. That information, along with information from the stream mapping study, will provide a foundation for assessing the impacts of project related pulsed-flow events on habitat, and for determining what restrictions on up-ramping rates, if any, would be necessary to protect habitat.

We appreciate the opportunity to comment on the PAD and request studies. For more information or if you have any questions, please contact Senior Fish and Wildlife Biologist, Ms. Carol Mahara, at (907) 280-9751 or at carol_mahara@fws.gov and reference Service file number 2025- 0127165.

Sincerely,

SARAH MARKEGARD

Digitally signed by SARAH MARKEGARD
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Sarah Markegard
Acting Branch Supervisor, Ecological Services

Enclosures

Literature Cited

Giefer, J., and B. Evers. 2025. Catalog of waters important for spawning, rearing, or migration of anadromous fishes – Southeastern Region, June 2025. Alaska Department of Fish and Game, Special Publication No. 25-04, Anchorage.

Ketchikan Public Utilities. 2025. Pre-Application Document Volume 1 – Public; Ketchikan Lakes Hydroelectric Project FERC NO. 420. 190pp.