



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
4700 BLM Road
Anchorage, Alaska 99507

In Reply Refer to:
FWS/R7/SAFWFO

Ms. Samantha Owen
Senior Regulatory and Licensing Consultant
McMillen Jacobs Associates
1101 Western Avenue, Suite 706
Seattle, Washington 98104

Subject: Preferred Alternative for the Eklutna Hydroelectric Project
(Service file # 2022-0074477)

Dear Ms. Owen:

Thank you for providing the analysis of the proposed alternatives during the Aquatic Technical Working Group (TWG) meeting on May 17, 2023, in emails on May 19 and June 18, 2023, and during a meeting on June 22, 2023. The Eklutna Hydroelectric Project is governed by the 1991 Fish and Wildlife Agreement (1991 Agreement), which requires the Purchasers to prepare a Fish and Wildlife Program that consists of measures for the protection, mitigation of damages to, and enhancement (PME) of fish and wildlife, and set a tentative schedule for their implementation. The 1991 Agreement also requires that the Governor give equal consideration to PME for fish and wildlife, the purposes of efficient and economical power production, municipal water supplies, and other beneficial public uses. Members of the TWG proposed several alternatives for the Fish and Wildlife Program and are now submitting preferred alternatives based on the analysis results.

The U.S. Fish and Wildlife Service (Service) appreciates the extensive work that went into alternative development and analysis. We offer our preferred alternative below based on the information currently available.

Engineering Measure

The engineering measures included in recent alternative analyses are presented in the enclosure along with our preferred downstream fish passage mechanisms for the measures that provide fish passage.

Our preferred alternative includes Measure P, the replacement dam as described in the enclosure because it greatly increases the amount of available fish habitat while providing for year-round

power generation. Although this alternative seems to find a balance with a wide range of stakeholder values and considerations, we understand that the capital expenditure estimates for construction are appreciable. Therefore, we support a Fish and Wildlife Program that includes time and opportunities for gathering public and financial support with the option to use components of Measures K, A, or C as described in the enclosure as part of a phased implementation approach or as a tiered contingency plan should public and financial support for Measure P fall short.

If it is not possible for a Fish and Wildlife Program to include opportunities for gathering public and financial support for Measure P as described above, then our preferred engineering measure would be Measure K, the existing dam with fish passage as described in the enclosure.

Instream Flows

Our preferred year-round instream flow regime is one that provides spawning and rearing habitat, connectivity to off-channel habitat, and allows fish passage around instream barriers. Unknown variables remain such as how the channel geometry will change in the future, how current and future obstructions from rockfalls will impede passage, what measures for downstream fish passage will be most effective, and how anchor ice will form in the channel. We propose FWS Alt 1 as described below in conjunction with an adaptive management strategy that allows for adjusting the flow regime based on new information and monitoring results.

FWS Alt 1 Instream Flows (cubic feet per second [cfs])

Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
160	160	160	160	75	75	75	75	75	75	75	160

Channel Maintenance Flows

The TWG proposed 22 different channel maintenance flow regimes for analysis that varied in magnitude, frequency, and duration. The following recommendations for a peak flow regime were developed based on the analysis:

- A peak flow should be approximately 7 times the mean annual flow to mimic the rainfall peak in similar Alaskan rivers
- A peak flow should occur 3 out of 9 years to allow for natural variability of incoming flows
- The hydrograph should be shaped such that it is extended at the peak and has a longer tail
- A longer (possibly 7 days) initial peak flow should be considered to help reset the channel

Our preferred channel maintenance flow regime will include these recommendations in conjunction with an adaptive management strategy that allows for adjusting the flow regime based on new information and monitoring results. While none of the proposed channel maintenance flow regimes perfectly align with these recommendations and several unknown factors remain, we prefer the channel maintenance flow regime TU Alt VE-2A as described below because it is the closest fit for the instream flow regime proposed above.

TU Alt VE-2A: 800cfs once, then 700cfs every three years in a shaped curve

Other Improvements

Our preferred alternative also includes other items such as Alaska Water and Wastewater Utility bridge construction, partial lakeside trail improvements, and physical habitat improvements.

Thank you for the opportunity to participate in the alternative development process. For more information or if you have any questions, please contact Senior Fish and Wildlife Biologist Wildlife Conservation, Ms. Jennifer Spegon at (907) 271-2768 or via email jennifer_j_spegon@fws.gov, or Senior Fish and Wildlife Biologist Ecological Services, Ms. Carol Mahara at (907) 271-2066 or via email carol_mahara@fws.gov and reference Service file # 2022-0074477.

Sincerely,

Jonathon Gerken
Acting Field Supervisor

Enclosure