

11/23/2022

Ms. Samantha Owen
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Native Village of Eklutna Land and Environment Department Technical Work Group Comments
Re: Draft Technical Memoranda Eklutna Lake Aquatic Habitat, Water Quality, and Potential Lake Dam
Fish Passage and Flow Release Options

Dear Samantha,

We appreciate the USFWS comments on these topics. We are very glad they advocate that our data and observations, as on above lake habitat, be included. We also liked how that they referenced the pumped energy storage idea. Their comments make it easy for us to comment here, since we can just say we agree with the FWS comments, with a few supplements:

“Page 3: Section 1.2, references two culverts in Tributary 4 that are likely fish passage barriers and that culvert removal in the area may occur in the future. Please clarify if removal of these culverts would be part of the Eklutna Project mitigation or something else.” (From FWS comments) NVE could likely get grants to remediate these culverts.

Page 7: Section 1.4.1.1, Our team’s observations indicate that many of the feeder tributaries to the lake river tributaries, in addition to the one observed coming out of the rocks, are likely groundwater sourced, and so likely to provide warm enough salmon aquatic habitat. We intend to assess this further.

Preliminary Engineering for Fish Passage

Trap and haul should not be necessary even at low lake levels with appropriate new “plumbing” engineering at the Eklutna Lake outlet. The lake should be kept high enough to cover the profuse potential sockeye spawning habitat around the lake now in the varial zone. Our analysis recommends a deeper channel through the natural moraine dam, likely with a new hoist gate dam there, which should allow seasonally adequate and continuous flow release, and fish passage like a fish ladder (or “... constructed natural bypass channel” (as per USFWS comments)) without needing trap and haul even at lower lake levels. Dam removal, as per FWS could be nice for the salmon, but probably not so advantageous for power operations. Trap and haul capacity might be retained as an emergency option for abnormally low water years. We are counting on your team to design such options for us.

Please note also our previous comments on PMEs and new engineering options. Our understanding and ideas have evolved somewhat, but they are still mostly valid and include more rationale.

Finally, it is worth reproducing Native Village of Eklutna’s position stated in;

Resolution 2022-04 -11 Łiq'a nagh qinqtudeł - We are hopeful the salmon will return to us"

"On behalf of Native Village of Eklutna people, the Traditional Tribal Council supports restoration of Eklutna River and Lake salmon habitat. This includes; 1) continuous flow in the river below the lake sufficient to support thriving salmon populations, with intermittent higher, habitat maintenance and recreation flows, 2) salmon passage between Eklutna River and Lake, and 3) moderation of Eklutna Lake level variability, at levels sufficient to facilitate sockeye spawning."

Of these, we understand that #3 is a big ask relative to what might be the most the most profitable lake level schedules for power generation, but we can try to do our best balancing these and salmon habitat needs. We hope that agreement can be reached between the 1991 Agreement parties on some PME options in time for NVE to apply for BIL grants in fall of 2023, to implement them. This should provide a win-win for salmon habitat, power generation, and all concerned.

In a recent letter of intent to USFW (due 12/16/22) we listed our BIL priorities as; 1) replace the Eklutna Lake dam, likely with a hoist gated dam with fish ladder, 2) revert the Eklutna River above the railroad bridge into its former channel so it will be directed under the bridge and not wash out its abutment when increased flow is released from the Lake, and 4) landscaping to facilitate restoration of off-channel habitat between Eklutna Lake and Thunderbird Creek with restored flows. We will be discussing these and other potential projects with FWS (the funding agency) soon, and hopefully with our 1991 Agreement partners not too long thereafter.

Sincerely,

Marc Lamoreaux and Carrie Brophil
Land and Environment (Etnena) Directors & TWG Members
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