

THE
CONSERVATION FUND

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February 18, 2024

Sam Owen
McMillen Jacobs

Todd Glass
Chugach Electric Association

RE: Addendum to TCF Comments on the Eklutna Draft Fish and Wildlife Program

Dear Ms. Owen and Mr. Glass,

Please accept the following as an addendum to the previously submitted formal comments and statement of position of The Conservation Fund on the Draft Fish and Wildlife Program. This addendum responds to remarks made by both of you as reported by Alaska Public Media under the header “Eklutna Hydro Owners Say They Won’t Extend Wildlife Restoration Process.” It’s worth noting that even here the reporter uses the word “restoration.”

We agree with Mr. Glass that the Eklutna Owners should not be obliged to restore the entire Eklutna River. Your obligations to restore the Eklutna River only obtain to that section of the Eklutna River degraded by the Eklutna Hydroproject; that is, the 8 miles between the former Lower Eklutna River Dam and Eklutna Lake that were and remain largely dewatered because of your operations. The only things stopping sockeye salmon from once again returning to Eklutna Lake are the Eklutna Lake “dam” and your dewatering of the river.

Mr. Glass, who appears to be speaking on behalf of the Eklutna Owners, asserts that “We never owned the lower dam. The dams were not part of what we bought in ’97.” A history refresher is in order for Mr. Glass. Anchorage Light & Power, the original developer of the Lower Eklutna Dam hydroproject, sold the project to the City of Anchorage in 1943; the City (which is now one of the Eklutna Owners) operated the Lower Eklutna River hydroproject until it sold “all its interest in and to said water rights, said generating plant, and associated facilities and properties” to the U.S. Bureau of Reclamation in 1953 for \$1.8 million to allow for the development of the Eklutna Hydroproject at

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Eklutna Lake. In 1989 the federal government agreed to sell to Eklutna Owners “the Eklutna Hydroelectric Project authorized, constructed, and operated pursuant to the Eklutna Project Act of July 31, 1950, including any and all property and facilities acquired or used in connection with Eklutna.” According to the Initial Information Package “the asset lists developed for the sale pursuant to the 1989 Eklutna Purchase Agreement did not include the lower diversion dam.” Prior to the demolition of the Lower Eklutna River Dam in 2016, Eklutna Inc. filed a quiet title action because of the uncertainty surrounding the ownership of the Lower Dam.

One of the Eklutna Owners (the City of Anchorage) clearly owned and operated the Lower Eklutna Dam, contrary to Mr. Glass’s statement that “We never owned the lower dam.” The City sold the Lower Dam and all its rights and infrastructure to allow for the construction of the Eklutna Hydroproject. “The signing of the above contract removed the last remaining legal hurdle to construction of the Eklutna Project.” To claim that these two hydroprojects are not intimately and legally related is false.

The APRN reporting contained graphics presented by Ms. Owen that contend that the Eklutna River could run dry in the winter months of some especially dry years. Presumably the analysis behind these graphics factors in actual winter consumption, not average annual consumption? AWWU winter consumption (Nov – Feb) is typically 85-90% of average annual consumption (19 mgd vs 21 mgd [29 cfs vs 32 cfs]). This rare event can be managed through the installation of a pump and piping system as described in the attached documents. Such a system would be a natural compliment to the removal of the Eklutna Lake Dam and deserves to be incorporated into additional analysis.

Sincerely,



Brad Meiklejohn
Senior Alaska Representative

Eklutna River Restoration Project Cylinder (Manhole) Pump Station in Eklutna Lake Proper

- 1 **Basis of Need** – there may be a need to improve (or add) to the AWWU Portal Project for various reasons as follows:
 - 2 The AWWU Portal alternative is a “single straw” into Eklutna Lake. The operation and thus success of the alternative relies on 35-year old infrastructure to be 100% available. The suggested mitigation for the “single straw” option is use of an existing gated opening at the base of the Eklutna Dam spillway structure that would allow Eklutna Lake water (or some ponded water when the Lake level is below the gated opening) to flow into the Eklutna River. Project documentation has stated that the pond may be capable of supplying up to 12 hours of water. The gate will be controlled to open when the Eklutna Water Project infrastructure is unavailable. This is a flawed concept because the bottom elevation of the opening is Elevation 852. Eklutna lake is below Elevation 852 six months out of the year and thus the gate cannot provide reliable water for a long-term (greater than 12 hour) outage.
 - 3 The last mile of the Eklutna River between the bottom of Eklutna Dam and the AWWU Portal facility is not part of the restoration zone.
 - 4 The AWWU Portal release may impact the ability of AWWU to operate at the original design capacity of the Eklutna Water Project.
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1. **Description of “Second Straw”** – Install one manhole (cylinder) pump station adjacent to Eklutna Lake near the Eklutna Dam and discharge to the pond that routes water to the gate at the base of the spillway structure. This Project alternative can alleviate all three concerns above.

1. **Details of the “Second Straw”:** Facilities necessary to construct the Second Straw:

- Construct one 16- foot minimum diameter concrete shaft adjacent to or in Eklutna Lake close to the existing pond. Bottom elevation should be at about 800. Top elevation should be at approximate Elevation 880 to match existing grade adjacent to the structure. The shaft top should be above Lake high water level for access and maintenance.
- Install three submersible non-clog centrifugal pumps, or three dry pit centrifugal pumps (depending on whether the shaft is designed for submersible or dry pit pump configuration). Pumps should be 8.6 mgd at about 45 feet of head (about 100 horsepower each) for 40 cfs total.
- Construct a suction pipe from the pump station into Eklutna Lake to obtain a bottom elevation of 800 to 805. Size would be 48-inch. Distance would be such to find the bottom elevation of 800.
- Install a stainless steel intake “crib” or box on the end of the suction pipeline.
- Install discharge pipeline from the pump station over the moraine to a close edge of the pond. Routing could be shallow bury and the pipeline must be anchored to prevent buoyancy. Pipeline number may be one at 36-inch diameter or two at 24-inch diameter. Civil works could reduce the piping length so that the water flows mostly overland to the pond.
- Provide a new electrical service from MEA to a new Electrical Room set at the top of the Pump Station. The pumps will be 480 volts.
- Construct one Electrical Room to house the electrical service equipment, three motor starters and control equipment.
- Operate the pump station in tandem with the AWWU Portal facility. Operation can take three forms: (1) the AWWU Portal Facility “straw” operates as primary; (2) the Eklutna Lake Pump Station “straw” operates as primary; or (3) both “straws” operate simultaneously. The two facilities will be communicating via SCADA so switchover for planned or emergency events can happen quickly and, if desired, automatically. No generator backup is thus required at the pump station.

1 **Pump Station Information:** Some information about the pump station in general and this adder alternative in particular:

2 Cylinder (manhole) pumps stations are very common in sewer and drainage projects around the country and around the world.

- AWWU has numerous cylinder (manhole) pump stations operating today of similar configurations and at depths of as much as 70 feet. Two example stations are Pump Station 2 in the Bootleggers Cove area of Anchorage (about 70 feet deep) and the Potter Creek Pump Station which is below water level all the time and is about 40 feet deep.
 - Location of the pump station, location of the suction pipe and location of the discharge pipe within Eklutna Lake will require some study of the profile of the bottom of Eklutna Lake and also the geology of the bottom of Eklutna Lake. Exact placement can only occur after such study.
1. **Future Benefits of the “Second Straw”:** This project adder blends well with the possibility of the future removal of the dam. The pump station can continue to operate as the dam is removed so the entire reach of the Eklutna River is maintained in a flowing condition. The pump station would also allow continued flow in the Eklutna River during periods in dry years when water is below the level of the moraine and is thus naturally unable to feed the Eklutna River.

