From: Barry Santana
To: Sam Owen

Subject: Comments on the Eklutna Draft Fish and Wildlife Program

Date: Saturday, February 17, 2024 5:49:22 PM

Thank you for the opportunity to comment on the Eklutna Draft Fish and Wildlife Program document. I appreciate the work you have done on the historical, contractual and alternative modification construction options to maintain hydro power for Chugach Electric/Matanuska Electric and protect the water supply for Anchorage. Your efforts are commendable; however there appears to be considerable differences of opinion on the best way to execute the 1991 Fish and Wildlife Program. It appears to me that most of the effort in the draft Plan is not for the fish and wildlife but for economics and ease of execution to modify in-place infrastructure. The simplest alternative, removal of the existing dam and restoration of the original river channel is missing. I find the

recommended solution presented in this draft to be based on unrealistic modeling¹ and it falls woefully short for the fish and wildlife.

I am a double MEA ratepayer, so I appreciate the need to keep utility rates low. However, based on your report we are talking about at most only 6% of Chugach/MEA power generation. Other informed sources state¹ "The Eklutna Hydro Project produces 40-47 MW, which is 2.2% of the Railbelt's 2000 MW installed generation capacity. As a portion of CEA and MEA combined installed generation capacity, it's about 3.5% ". As a double MEA ratepayer, I would appreciate it if the economic portion of your draft proposal could clearly state what rate increase from ~\$0.22/kWh I would incur **if NO power was currently available from Eklutna Hydro**. This should be a single sentence addition.

Recently electric rates have been in the news due to the fact that Cook Inlet (CI) gas is rapidly running out; 2 to 5 years has been stated in sources. Several solutions have been discussed: (North Slope NG pipeline-\$50+ billion, 10 years minimum; major State subsidies for CI Producers, many \$ billions; or imported LNG, higher costs). These all require State investment or subsidies with an accompanying electric rate increase estimated to be 50% to 100%. So what will Chugach and MEA do for the other 94 to 96.5% of their power generation? They will raise member electric rates 50 - 100%, I suspect. The increase to ratepayers for missing Eklutna hydro power will be relatively minor I believe. It would be simple for me to approximate the future impact on my power costs if you provide the information above regarding the current removal of Eklutna Hydro from the rate.

My preference for the Plan is to restore the five species of salmon to a pre-1914 Eklutna Lake watershed. That is not difficult according to UAF professor Dr. Peter Westley. He has recently stated "Salmon can recover quickly if given a chance." Removal of the dam would allow Chinook, coho and sockeye salmon (the most sought after species) to have a chance to repopulate the river, lake and tributaries, which is 65% of their available habitat. Over time, the watershed has the potential, with a resurgence of nutrients from spawned out fish, to also support native Dolly Varden and trout.

The Community Supported Alternative to remove the dam and restore the river channel has been offered funding by The Conservation Fund and Trout Unlimited at no cost to electric utility ratepayers. They have already removed a lower dam successfully in 2018 with this approach. The effort may be delayed for up to ten years to allow the utilities to replace the relatively small Eklutna Dam baseload generation (2-6% of current generation) with renewables, like wind and solar. Backup baseload reserve to support the renewables when the sun isn't shining and the wind isn't blowing could be easily provided on the rail belt by the planned 160,000 MWh Dixon Diversion to Bradley expansion or the 1.2 GWh utility-scale long-duration Pumped Thermal Energy Storage Project near Healy selected by US DOE in September 2023.

This latest Community Supported Alternative recommended by NVE could save the utilities and

ratepayers money and let Nature take us back to the watershed and salmon runs of the early 1900s. This option should not impact the AWWU water line serving Anchorage. The water intake is lower than the lake elevation managed for hydropower lows. There have been concerns regarding the water line within the river bed and downstream bridges under extreme flows, but those are both solvable engineering issues. This is a relatively simple solution compared to the complex scheme proposed in the current plan. I strongly support the removal of Eklutna Dam and return of the early 1900s Eklutna River in the old drainage. Evaluation of this alternative needs to be added to the Eklutna Draft Fish and Wildlife Program document. To present anything less, shortchanges the Fish and Wildlife aspect of the Plan and does not satisfy requirements of the 1991 Agreement.

More concerning, in my opinion, is Bretwood Higman's comment here about potential large-scale landslides above Eklutna Lake and accompanying lake tsunamis. These potential events will affect any option; during higher water levels with a dam breach results could be more catastrophic than a natural lake and downstream flowing river. Lower lake levels and the natural river drainage may offer a surge capability of sorts. Eklutna Village and surrounding areas need to learn more about this concern.

Reference: 1. "Bring back a once-thriving salmon river"; Email, SalmonState, February 17, 2024.

Thank you for your consideration of my comments,

Barry W. Santana, PhD PE Wasilla, Alaska