



February 18, 2023

Submitted via Email

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Re: Eklutna Hydroelectric Project Draft Fish and Wildlife Program

Dear Ms. Owen:

The Center for Biological Diversity (“Center”) provides the following comments on the Chugach Electric Association, Matanuska Electric Association, and Municipality of Anchorage (“Project Owners”)’s Eklutna Hydroelectric Project Draft Fish and Wildlife Program (“Draft Program”).¹

I. Purpose and Scope of the 1991 Fish and Wildlife Agreement

The purpose of the 1991 Eklutna Fish and Wildlife Agreement (“1991 Agreement”) and the resultant Fish and Wildlife Program is to develop and implement measures to “protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)” from the harms of the Eklutna Hydroelectric Project (“Project”).² Currently, no water spills over the Eklutna Lake dam down the river except during floods. A 4.5-mile bypass tunnel diverts water from the lake to the power plant. Of the water diverted, 90% is diverted to the Knik River for hydropower, while 10% is diverted for Anchorage drinking and wastewater, effectively blocking the remaining 14 miles of Eklutna River from its water source.³ The scope of the protection, mitigation, and enhancement requirements must include the entire Eklutna watershed, given the Project’s substantial impacts to the flow of water, nutrients, sediment, fish, and wildlife, and more up and down the river, effecting the entire ecosystem far beyond the limited river corridor.⁴ The Department of Energy’s Environmental Assessment (“EA”) for the Eklutna Purchase Agreement states that “[d]uring reviews of the legislative proposal, loss of a sockeye

¹ Chugach Electric Association, Matanuska Electric Association, and Municipality of Anchorage (“Project Owners”), Eklutna Hydroelectric Project Draft Fish and Wildlife Program (Oct. 27, 2023).

² Fish and Wildlife Agreement Snettisham and Eklutna Projects at 1 (Aug. 7, 1991); *See also* Eklutna Draft Fish and Wildlife Program at 45; *See also* Alaska Power Administration Asset Sale and Termination, Pub. L. 104-58, title I § 104(a)(2) (Nov. 28 1995).

³ Native Village of Eklutna, “Eklutna River: Ildlughetnu” (accessed Nov. 17, 2023); *see also*, Kleinschmidt Associates, Draft Instream Flow Technical Memo at 2 (Sept. 28, 2022) (“In 1955, the federal government completed construction of a new hydropower project and in 1964 a new storage dam which effectively eliminated any flow releases from Eklutna Lake to the Eklutna River.”); *see also*, Trout Unlimited, Eklutna River Workshop: Summary of Outcomes, Recommendations, and Future Needs (Jun. 2018).

⁴ *See*, EPA WATERS GeoViewer 2.0 (accessed Feb. 18, 2024)

<https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=074cfede236341b6a1e03779c2bd0692>.

salmon run that once spawned in Eklutna Lake was identified [...]. This specific problem and the desires of the fish and wildlife agencies to provide appropriate consideration to fish and wildlife resources over the long run led to the August 7, 1991 Agreement.”⁵ This shows that at minimum, the Fish and Wildlife Program must address reconnecting the lower river to the lake and upper tributaries. Moreover, since the lower diversion dam was removed in 2018, the Project’s continued diversion of all controllable flow at Eklutna Lake and the complete disconnection of the river to the lake and upper tributaries are, and will continue to be, the primary causes for ongoing degradation of fish and wildlife habitat in the Eklutna River system. The Divestiture Report notes that the Agreement’s fish and wildlife measures were intended to “work at least as well as Federal regulation for the intended purpose of mitigation and enhancement of affected fish and wildlife resources,” and were to be “quite similar to that under the [Federal Energy Regulatory Commission (“FERC”)] licensing” process for hydroelectric projects.⁶

II. The Draft Program Analysis is Incomplete, Flawed, and Otherwise Insufficient for a Decision under the Agreement

A. The Draft Program Does Not Meet the Purpose of the Agreement

The AWWU Portal Valve alternative proposed in the Draft Program by the Project Owners leaves Eklutna Lake and upper tributary streams completely disconnected from the lower Eklutna River, maintaining over a mile of dry streambed.⁷ The flows the Project Owners propose to release from the AWWU Portal are the minimum flows considered by any of the Parties to the 1991 Agreement during the Agreement study process, with small high-flow events in only three out of every ten years.⁸ The Draft Program provides no solution for the complete blockage of salmon reaching the extensive lake spawning habitat required by sockeye salmon and 15 miles of upper tributaries spawning habitat above the lake that is highly amenable to Chinook and coho salmon completely stranded.⁹ Without a connection to Eklutna Lake and upper tributaries, mitigating and enhancing the disconnection and damage to those key spawning and rearing grounds and habitat is impossible. The Project Owners admit in the Draft Program that “no change in sockeye rearing habitat is anticipated.”¹⁰ The proposed nominal flow releases from the AWWU Portal will only minimally enhance Chinook and coho salmon and their habitat in the lower Eklutna River, including side channel and off-channel habitat. None of the federal and state fish and wildlife agencies consider the Draft Program to adequately meet the requirements of the 1991 Agreement.¹¹

⁵Divestiture Summary Report, Sale of Eklutna and Snettisham Hydroelectric Projects at 19 (Apr. 1992).

⁶ *Id.* at 20, 18.

⁷ Eklutna Draft Fish and Wildlife Program at 46-56.

⁸ *Id.* at 39.

⁹ *See, e.g.*, Native Village of Eklutna, Eklutna Lake and Tributaries Salmon Habitat (2024); *See also* McMillian Jacobs Associates, Eklutna Lake Aquatic Habitat and Fish Utilization, Year 2 Study Report Draft (2023); *See also* Native Village of Eklutna, TWG 2021-2022 Final Report (2023).

¹⁰ Eklutna Draft Fish and Wildlife Program at Appendix B-4.

¹¹ *See*, USFWS, Draft Fish and Wildlife Program and Draft Summary of Study Results for the Eklutna Hydroelectric Project (Dec. 6, 2023); *See also*, USFWS, Enclosure: US Fish and Wildlife Service Comments on the Draft Fish and Wildlife Program and Draft Summary of Study Results for the Eklutna Hydroelectric Project (Dec. 6, 2023); *See also*, NMFS, Draft Fish and Wildlife Program preferred alternative for the Eklutna Hydroelectric Project; 1991 Fish and Wildlife Agreement (Dec. 6, 2023); *See also*, ADFG, Draft Fish and Wildlife Program Comment Letter (Nov. 23, 2023).

B. The Project Owners Did Not Follow the Delineation of Responsibilities in the Agreement

The Agreement carefully divides which considerations should be made by which Parties at which stage of the mitigation process. During the Study Plan stage, the Project Owners are “to examine, and quantify, if possible, the impacts to fish and wildlife from the Eklutna [...] project” and “shall consider the impacts of fish and wildlife measures on electric rate payers, municipal water utilities, recreational users and adjacent land use, as well as available means to mitigate these impacts.”¹² The Agreement then requires the Project Owners to recommend measures “for the protection, mitigation of damages to, and enhancement of fish and wildlife (including related spawning grounds and habitat).”¹³ While it can be reasonably interpreted that the Program would include the analysis from the study plan of the impacts of fish and wildlife measures on other considerations, such as electric ratepayers, the Agreement does not state, as it does clearly in other sections, that other considerations, such as electric rate payers, power production or energy conservation, are to be considered when evaluating and recommending measures that are necessary to mitigate the Project’s impacts on fish and wildlife.¹⁴ The Agreement is clear that the Program’s only consideration is meeting the purpose of the Agreement, which is “the protection, mitigation of damages to, and enhancement of fish and wildlife (including related spawning grounds and habitat).”¹⁵ It is then the Governor of Alaska’s responsibility, not the Project Owners’, to evaluate whether the proposed Program of fish and wildlife measures is appropriate after considering the several criteria listed in the Agreement in making his final Program determination.¹⁶ The Project Owners overreach their authority under the Agreement by claiming that they are charged not just with undertaking the study process, but also with undertaking the policy analysis to give equal consideration to the eight purposes the Governor must balance in his final decision when promulgating a Program.¹⁷ They are neither qualified nor authorized to make policy determinations and have plain conflicts of interest.

C. The Project Owners Have Not Implemented the Consultation Process to Protect Fish and Wildlife from Project Impacts “At Least As Well” as a FERC Process

The consultation process agreed to in the Agreement was intended to be “quite similar to that under [FERC] licensing of hydroelectric projects with the Governor of Alaska assigned a role similar to FERC’s in decisions on fish and wildlife measures.”¹⁸ The Agreement process was intended to work “at least as well” for fish and wildlife as a FERC relicensing process.¹⁹ Yet, the consultation process has not been implemented in a manner that matches the procedural protections afforded to fish and wildlife in a FERC relicensing process. The deficiencies in the

¹² Fish and Wildlife Agreement at 2.

¹³ *Id.* at 3.

¹⁴ *Id.* at 2, 3.

¹⁵ *Id.* at 3.

¹⁶ *Id.* at 4 (“The Governor shall give equal consideration to the purposes of efficient and economical power production, energy conservation, the protection, mitigation of damage to, and enhancement of fish and wildlife (including related spawning grounds and habitat), the protection of recreation opportunities, municipal water supplies, the preservation of other aspects of environmental quality, other beneficial public uses, and requirements of state law.”).

¹⁷ Eklutna Draft Fish and Wildlife Program at 44.

¹⁸ Divestiture Report at 18.

¹⁹ *Id.* at 20.

process include not only the impacts of project construction, but the totality of impacts of project construction, operation, and maintenance on fish and wildlife and their habitat, including the temporal loss of services and functions of a free-flowing anadromous river.²⁰

One of the primary deficiencies in the consultation process has been the Project Owners' conflation of improvements to the baseline condition with adequate protection, mitigation, and enhancement of fish and wildlife impacted by the Project. This misunderstanding of the level of protection the Project Owners are required to deliver under the Agreement, and that would similarly be required in a FERC proceeding, has contributed to an inadequate scope of study and alternatives analysis. Rather than develop and evaluate alternatives according to their comparative effectiveness in mitigating the impacts caused by the Project's dewatering of the Eklutna River and the resulting destruction of fish and wildlife habitat from the 1950s to present, the Project Owners evaluated alternatives according to their "ecological lift in terms of gains in salmon spawning and rearing habitat" compared to their cost.²¹ However, "ecological lift" is not the same as providing adequate and equitable protection, mitigation, and enhancement of fish and wildlife. In short, the Project Owners have developed a Draft Program that would be marginally better for fish and wildlife, but not one that would actually mitigate the project's impacts on fish and wildlife.²²

Another significant deficiency in the consultation process has been the Project Owners' unilateral rejection of reasonable alternatives without rigorous study or analysis.²³ This is a departure from a FERC relicensing proceeding where FERC, not the applicant, is required under the Federal Power Act ("FPA") and the National Environmental Policy Act ("NEPA") to undertake a full study of alternatives as the basis for determining that a project, as licensed, will be best adapted to a comprehensive plan of development.²⁴ Here, by contrast, the Draft Program

²⁰ See 40 C.F.R. § 1508.1(g) (definition of "effects" for purposes of environmental analysis under the National Environmental Policy Act); see also USFWS and NMFS, Final ESA Section 7 Consultation Handbook at 4-30 (Mar. 1998) ("The total effects of all past activities, including effects of the past operation of the project, current non-Federal activities, and Federal projects with completed section 7 consultations, form the environmental baseline."); see also 33 C.F.R. § 332.2 (Corps regulations requiring consideration of "temporal loss" in determining appropriate mitigation).

²¹ Eklutna Draft Fish and Wildlife Program at 31 (According to the Draft Program, "[t]he process helped to narrow down the list of comprehensive alternatives by removing those that either did not provide a significant ecological lift, or where multiple alternatives provided a similar ecological lift, those that were more costly could be removed from consideration.")

²² See Eklutna Draft Fish and Wildlife Program at 45-46.

²³ Based on our review, the Owners have exercised almost complete discretion in the scope and substance of the environmental analysis contained in the Draft Program document. This is a significant departure from a FERC proceeding where FERC is responsible for independently verifying any information it relies upon to comply with its statutory responsibilities to evaluate the environmental impacts of its licensing decisions. See, e.g., 16 U.S.C. § 797d.

²⁴ 16 U.S.C. §§ 803(a), 808(a); *Green Island Power Auth. v. FERC*, 577 F.3d 148, 168 (2d Cir. 2009) (... "FERC is statutorily obligated, pursuant to the 'best adapted' standard outlined in sections 10 and 15 of the FPA, to give full consideration to all feasible alternatives, even where it ultimately cannot license those alternatives."). FERC is subject to a parallel requirement under NEPA to develop and conduct a rigorous and detailed analysis of all reasonable alternatives. 42 U.S.C. § 4332(2)(H), 40 C.F.R. § 1502.14. Given the potentially significant impacts of continued operation of a major hydropower project, FERC complies with NEPA by preparing an environmental document that evaluates the comparative merits of several alternatives in preparation for any licensing or relicensing decision. 40 C.F.R. § 1502(b); 18 C.F.R. §§ 380.5, 380.6

does not demonstrate the Project Owners adequately considered a reasonable range of alternatives proposed for analysis by the Parties and other stakeholders.²⁵ Rather than provide enough detail about each alternative for the Governor to “evaluate their comparative merits,” the Project Owners peremptorily eliminated certain alternatives from detailed study based on their biased cost-benefit assessment.²⁶

The Project Owners’ exclusion of a dam removal alternative is an egregious error in the environmental analysis.²⁷ Dam removal is a reasonable alternative because it would provide the most protection, mitigation, and enhancement of fish and wildlife at a cost far lower than other alternatives considered.²⁸ Because the Draft Program does not consider dam removal, the Governor cannot make an informed decision as to how dam removal compares to the Project Owners’ preferred alternative.

Again, in a FERC proceeding the Project Owners would not have been allowed to unilaterally limit the analysis of alternative measures, like dam removal, to mitigate the Project’s impacts on fish and wildlife resources, over the objections of the National Marine Fisheries Service (“NMFS”) and US Fish and Wildlife Service (“USFWS”). For example, under FPA section 18, NMFS and USFWS have authority to prescribe fishways that must be included, without modification, in any license issued by FERC.²⁹ Under FPA section 10(j), a FERC license must include conditions to “adequately and equitably protect, mitigate damages to, and enhance, fish and wildlife (including related spawning grounds and habitat) affected by the development, operation, and management of the project” based on recommendations from NMFS, USFWS, and other state and fish and wildlife agencies.³⁰ NMFS would consider the fishery management plan for Pacific salmon as a comprehensive plan for considering mitigation and enhancement for salmon in this process.³¹

Another significant deficiency in the consultation process has been the Project Owners’ failure to evaluate the potential impacts of their proposed Draft Program and alternatives on the critically endangered Cook Inlet beluga whale – a national NMFS priority species – and its designated critical habitat which includes the mouth of the Eklutna River.³² Again, such evaluation would be required in any FERC relicensing under Endangered Species Act (“ESA”) section 7.³³ Given the

²⁵ See Eklutna Draft Fish and Wildlife Program at 65-75.

²⁶ *Id.*

²⁷ 40 C.F.R. § 1502.14(a).

²⁸ U.S. Army Corps of Engineers, Eklutna River Aquatic Ecosystem Restoration Technical Report at i.

²⁹ 16 U.S.C. § 811; See *American Rivers v. FERC*, 187 F.3d 1007 (9th Cir. 1999), *as amended* 201 F.3d 1186, 1210 (9th Cir. 2000) (“Where the Commission disagrees with the scope of a fishway prescription, it may withhold a license altogether or voice its concerns in the court of appeals, but at the administrative stages, ‘it is not the Commission’s role to judge the validity of [the Secretary’s] position-substantially or procedurally.’”).

³⁰ 16 U.S.C. § 803(j)(1). FERC may modify a Section 10(j) recommendation only if it finds an alternative condition will provide adequate and equitable fish and wildlife protection, mitigation, and enhancement. *Id.* at § 803(j)(2).

³¹ North Pacific Fishery Management Council, Fishery Management Plan for the Salmon Fisheries in the EEZ off Alaska. Appendix A. Anchorage, Alaska (2021).

³² See 76 Fed. Reg. 20,180 (Apr. 11, 2011).

³³ 16 U.S.C. 1536; 18 C.F.R. § 380.13. Under ESA section 7, all federal agencies, including FERC are required to consult with NMFS and/or USFWS to ensure that the reauthorization by the federal agency is “not likely to jeopardize the continued existence of any endangered species [...] or result in the destruction or adverse modification of habitat of such species [...]” 16 U.S.C. § 1536(a)(2); see also, FERC, Handbook for Hydroelectric

Agreement's express intent to provide comparable protection to a FERC proceeding, the Owners failure to fully evaluate the Project's impacts on the Cook Inlet beluga whale is inexplicable and unjustifiable.

D. The Draft Program Undervalues Traditional Ecological Knowledge

It is well-established traditional ecological knowledge that Eklutna Lake and upper tributary streams once hosted abundant salmon runs, including sockeye, Chinook, and coho salmon. The Draft Program dismisses the possibility of a substantial sockeye run to the lake and downplays the quality and quantity of salmon habitat in the upper tributaries. This conclusion ignores the traditional ecological knowledge of the Native Village of Eklutna ("NVE") that the Project Owners are well aware of and which was shared throughout the Study Plan process.³⁴

E. The Preferred Alternative is Insufficient for Protection, Mitigation and Enhancement of High Flows Blocked by the Dam

High flows are essential to mimic beneficial flooding. The maintenance flow regime in the preferred alternative is severely inadequate. The 220 cfs maximum flushing flows in the Draft Program is less than 20% of the average flushing flows of 1,402 cfs that USFWS estimated would be necessary to recreate the flows that historically supported the natural fishery and created the natural river channel and off-channel habitat.³⁵ Worse, the Draft Program imagines the peak flow for just a few hours for just three out of every ten years before returning to conditions that approximate a severe drought. NMFS concluded that the proposed flushing flows in the Draft Program "are unlikely to modify substrates and support habitat complexity in a meaningful way after nearly a century of limited impactful flow events."³⁶ The chosen channel maintenance flow hardly mitigates for the Eklutna River's deprivation of almost a century of flooding with a maximum recorded value of approximately 3,000 cfs.³⁷

F. The Draft Program Directly Contradicts Other Assessments of Historic and Potential Salmon Habitat in Eklutna Lake and Upper Tributaries

The Draft Program significantly discounts the potential of the upper Eklutna tributaries as vital salmon habitat. NVE's TWG 2021-22 Final Report combines traditional ecological knowledge with current surveys and science of the headwaters of the Eklutna River to conclude that there is expansive, preferred habitat for Chinook and coho salmon, which is currently occupied by Dolly Varden, showing its potential.³⁸ This report found that the clearwater tributaries for the West Fork have high-quality habitat and that much of the East Fork has suitable habitat in its main

Project Licensing at B-2 (Apr. 2004). In the consultation process, the action agency and consulting agencies are required to consider only the best available science. *Id.*

³⁴ See, e.g., Native Village of Eklutna, Comments of Eklutna Hydro Initial Information Package (Apr. 24, 2020); Native Village of Eklutna, NVE Comments on Proposal Final Year 2 Study Plans: Comments from a Tribal Perspective (Jun. 2022); See also, Native Village of Eklutna, TWG 21-22 Final Report at 3 (2023).

³⁵ U.S. Fish and Wildlife Service, Upper Eklutna River Survey Preliminary Fish Habitat Flow Assessment.

³⁶ National Marine Fisheries Service, Comment Letter to Draft Fish and Wildlife Program (Dec. 5, 2023).

³⁷ McMillen, Initial Information Package at 77 (2020).

³⁸ Native Village of Eklutna, TWG 21-22 Final Report.

stem and tributaries. NVE’s Land and Environment Department has concluded that there are over 15 miles of salmon habitat in the upper tributaries.³⁹

The Draft Program also significantly discounts the potential of Eklutna Lake as vital salmon habitat. The Draft Program concludes that there was never a large run of sockeye to the lake, pointing to limiting factors such as the lake’s turbidity, nutrient levels, and size of kokanee.⁴⁰ This current condition may be due to the denial to the lake of marine derived nutrients from salmon carcasses and impacts from the current 40-60 foot biologically devoid varial zone resulting from hydroelectric power water drawdowns around the lake, including such impacts as reduced aquatic vegetation.⁴¹ The Matanuska Susitna Borough Fish and Wildlife Commission’s comments on the Draft Program state “[i]t is important to note and clarify that the analysis performed by McMillen in addressing the potential spawning and rearing habitat for anadromous fish species and the primary productivity of Eklutna Lake seems to ignore the production of very similar lakes with Alaska. It also seems to ignore the effects of salmon carcasses in providing nutrient amendments for sustaining and restoring stream and lake productivity.”⁴² Moreover, a primary source for the Project Owner’s conclusion is a 2017 study, which they greatly misrepresent. The study concluded that its results “can[not be] construed as evidence that [salmon runs to the lake] did not [exist].”⁴³ The 2017 study, rather, found that, based on the lake’s water volume and turnover rate, as many as 15,000 sockeye could have spawned in the lake annually, which is far from an insignificant number.⁴⁴ A co-author of the paper recently stated tha’ “[a]nyone who cites the study to argue that Eklutna Lake had no salmon or an “insignificant” number isn’t using it scientifically, they are using it politically.”⁴⁵

Kleinschmidt Associates surveyed 14 areas totaling 68,512 square ft. around Eklutna Lake that are potentially suitable for sockeye spawning under favorable lake level regimes. These are now largely in the barren varial zone due to 40-60 foot lake drawdowns. However, they contain appropriate slopes, gravel sizes and seeping groundwater or potentially suitable substrate for sockeye spawning, and there may be even more than reported. A total of 331 spawned-out kokanee were observed at Eklutna Lake during the survey period, finding “[s]pawned kokanee ranged from 4.5 – 6.5 inches [...]”⁴⁶ Alaska Department of Fish and Game (“ADFG”) biologists have told us these would grow to normal sockeye size if allowed to develop in the ocean and that these kokanee are likely descendants of a native ocean-run population, since there is no record that they were ever stocked. The Draft Program acknowledges that Trout Unlimited’s Alternative and USFWS’s Alternative B – modifying the current dam to allow upstream and downstream fish passage – both create significant gains in sockeye spawning habitat, which would come from increased lake spawning habitat.⁴⁷

³⁹ Native Village of Eklutna Land and Environment Program, Eklutna Lake and Tributaries Salmon Habitat (2024).

⁴⁰ *Id.* at 68-71.

⁴¹ *See*, Email from Rick Sinott to Dustin Lorah, NVE (Dec, 1, 2023 at 10:05AM).

⁴² Matanuska-Susitna Borough Fish and Wildlife Commission, Comment Letter on Draft Program (Feb. 9, 2024).

⁴³ Loso, Michael et al., Evaluating Evidence for Historical Anadromous Salmon Runs in Eklutna Lake, Alaska 70 Arctic at 270 (Sept. 2017);

⁴⁴ *Id.* at 259.

⁴⁵ Email from Rick Sinott to Dustin Lorah (Nov. 30, 2023 at 6:50PM).

⁴⁶ Kleinschmidt Associates, Lake Aquatic Habitat and Fish Utilization Study Year 1 Interim Report DRAFT (Feb. 2022) at 12-20.

⁴⁷ *Id.* at 42.

Overall, NVE Land and Environment Department’s assessments indicate the following stream miles would be restored by reconnecting the lake and upper tributaries to the lower river and restoring the natural flow regime: 12 miles in the river below the lake, 7 miles in the lake, and 15 miles above the lake in the upper tributaries.⁴⁸ NVE Land and Environment Department’s measurements are in stream miles, and that metric is used to assess lake habitat, so 7 miles of lake habitat undervalues the actual habitat available for restoration in the lake. These estimates also undervalue habitat off the main channel in the lower river below the lake that could be restored with higher flow releases than are proposed in the Draft Program. Full recovery would therefore restore a minimum of 34 miles of salmon habitat and likely much more taking into account the undervaluing of lake and off channel habitat. The Draft Program, on the other hand, proposes to marginally restore only 11 miles, less than 35% of the conservative estimate of possible salmon habitat in the Eklutna watershed.⁴⁹

G. The Program’s Analysis of Non-Salmonid Wildlife is Severely Inadequate

The Agreement’s protection, mitigation, and enhancement purpose is not limited to salmon but instead includes all fish and wildlife impacted by the Project. Reducing the ecological function of the tidal wetlands, lower river, lake, and upper tributaries from the Project’s impacts reduces the health of fish and wildlife throughout the watershed. However, the Draft Program is not built upon any surveys or studies of marine mammals and its consideration of terrestrial and avian wildlife and habitat is severely inadequate.

The wildlife habitat survey study area boundary was limited to the lower end of the lake, the current river channel corridor, and a section of the wetlands at the river mouth.⁵⁰ This study area boundary is insufficient and should have included the entire Eklutna watershed, including the upper tributaries, the entire lake, and the off channel stream areas in the lower river valley, given the Project harms to the whole Eklutna watershed ecosystem. Because of the limited study area, the wildlife analysis could not fully consider the protection, mitigation, and enhancement from all the alternatives, including the potential restoration of habitat from increasing flows and reconnecting the lower river to the lake and upper tributaries.

Terrestrial and avian wildlife and habitat studies were primarily conducted via aerial surveys and literature reviews, both which have issues regarding their accuracy and the amount of place-specific detail they can provide.⁵¹ A recent scientific review of the accuracy of wildlife aerial surveys stated that aerial surveys can be an efficient platform to collect observational counting data “across large spatial areas,” but which are far less well-suited for specific and small-scale geographies like the Eklutna survey area.⁵² Furthermore, the review noted common errors such as “nondetection, counting error, and species misidentification” that if not adequately addressed at all stages of the study “can provide data that obscure animal-environment relationships or

⁴⁸ Native Village of Eklutna, TWG 21-22 Final Report.

⁴⁹ *Id.*

⁵⁰ ABR, Inc., Eklutna Hydroelectric Project Wetlands and Wildlife Habitat Study Report Draft at 3 (Mar. 2023).

⁵¹ Chugach Electric Association, Matanuska Electric Association, and Municipality of Anchorage (“Project Owners”), Eklutna Hydroelectric Project Draft Summary of Study Results at 46-50 (Oct. 2023).

⁵² Davis, Kayla L. et al., Errors in aerial survey count data: Identifying pitfalls and solutions, 12 Ecology and Evolution e8733 (Mar. 18, 2022).

introduce biases into inferences.”⁵³ The Project Owners provide no details or assurances that their limited surveys addressed these common errors. Furthermore, aerial and other surveys for wildlife were extremely limited. For example, only one day of raptor aerial surveys were completed, four days of migratory shorebird and waterfowl surveys were completed, and three days of moose surveys were completed, all during 2022.⁵⁴ These surveys would not account for any annual variation in wildlife abundance or timing in the Eklutna watershed, as well as seasonal access limitations, among other issues. Wildlife habitat analysis relied on historic and current aerial photography with no ground vegetation surveys completed.⁵⁵ Scientific literature on Alaska wildlife and habitat is rarely area specific and is therefore not necessarily a valid representation of species using the Eklutna watershed either for their full lifecycles or for their migration routes or travel corridors.

Overall, the Plan recognizes that increasing the Eklutna River’s flow below the dam will “directly or indirectly benefit several ecologically and/or culturally important wildlife species” such as wolves, moose, raptors, and bears.⁵⁶ Yet, because of the severe lack of adequate baseline data, it is impossible to truly analyze and understand how the different alternatives would impact and potentially benefit all wildlife and their habitat and to what degree. For example, even though listed in the “observed or expected” wildlife list, the Draft Program fails to consider imperiled species like the Little brown bat (*Myotis lucifugus*) that rely on the Eklutna watershed and for which mitigation and enhancement of their foraging habitat in the lower Eklutna River valley, which is currently harmed by the Project, could be improved by increasing flows and rebuilding off channel habitat in the lower river.⁵⁷ The Draft Program also fails to analyze why certain wildlife populations appear to be below normal levels. For example, the Summary of Study Results notes that “[w]aterfowl and shorebird numbers in the study area were moderate and low, respectively, during the field surveys” and that “[s]horebirds were noticeably absent during the spring surveys.”⁵⁸ This may be an example of a system that is in depression from nearly a century of harms from hydroelectric dams. These examples, and many others, highlight the Draft Program’s inadequacies in considering and rigorously analyzing how the different alternatives would impact all non-salmonid fish and wildlife in the Eklutna system and whether the preferred alternative provides adequate mitigation and enhancement.

Regarding marine mammals, the Draft Program fails to consider the protection, mitigation, and enhancement of Cook Inlet beluga whales, one of the nation’s most critically endangered marine mammals. The best available science shows that Cook Inlet belugas could significantly benefit from increased salmon runs in the Eklutna River. Given the mouth of the Eklutna River is within designated critical habitat in upper Cook Inlet where the majority of the Cook Inlet beluga population forages during the summer, the critically endangered whales should be a primary concern for the Program.⁵⁹ The 2011 critical habitat designation for Cook Inlet belugas identified shallow intertidal and subtidal waters of Cook Inlet in close proximity to medium to high flow anadromous fish streams along with four species of Pacific salmon (Chinook, sockeye, chum,

⁵³ *Id.*

⁵⁴ Eklutna Draft Summary of Study Results at 46-49.

⁵⁵ *Id.* at 42-43; *see*, Email from Terry Schick, ABR Inc., to Carrie Brophil, NVE (Nov. 22, 2022 at 11:27AM).

⁵⁶ Eklutna Draft Fish and Wildlife Program at 53.

⁵⁷ ABR Inc., Eklutna Hydroelectric Project Terrestrial Habitat Study Report Draft at 23 (Mar. 2023).

⁵⁸ Eklutna Draft Summary of Study Results at 47.

⁵⁹ 76 Fed. Reg. 20,180 (Apr. 11, 2011).

and coho) as essential to the beluga’s conservation (also known as Primary Constituent Elements).⁶⁰ NMFS 2016 Recovery Plan for Cook Inlet belugas identifies prey availability as a threat of medium concern for their recovery.⁶¹ NMFS acknowledges the heightened importance of prey availability, specifically Pacific salmon, for conserving Cook Inlet beluga whales. NMFS’ Species in the Spotlight, 2021-2025 report states that, “[s]urvival and recovery of Cook Inlet beluga whales depend on an adequate quantity, quality, and accessibility of prey resources.”⁶² In a recent notice to issue an IHA proposal from the Port of Alaska, NMFS noted that, “Pacific salmon represent the highest percent frequency of occurrence of prey species in CIBW stomachs.”⁶³ The notice highlighted that rich foraging areas to the north of the Port of Alaska, including the Eklutna River, are important to belugas and that the whales correlate their movements into Knik Arm around the timing of the salmon runs in those rivers.⁶⁴ A recent 2023 study by Wild et al. delineated portions of Cook Inlet, including Knik Arm and the mouth of the Eklutna River, as a Biologically Important Area (BIA) for the small and resident population of Cook Inlet beluga whales based on scoring methods outlined by Harrison et al. in 2023.⁶⁵

The best available science shows that restoring abundant salmon runs to the Eklutna River may be one of the key strategies available for Cook Inlet beluga recovery by creating more foraging opportunities for belugas in upper Cook Inlet. The results of a 2020 study by Norman et al. suggest that “reproductive success in [Cook Inlet belugas] is tied to salmon abundance” in the Deshka River, which is also located in upper Cook Inlet near Knik Arm and the Eklutna River.⁶⁶ That study showed that “if salmon runs remained at their current levels, the [Cook Inlet beluga] population would likely continue its current slow decline,” yet the study found that “if Chinook salmon increased 20% or more, the current decline would likely be reversed.”⁶⁷ Furthermore, the study simulations found that “doubling the salmon abundance would be sufficient to allow recovery of the population regardless of impacts from other threats.”⁶⁸ The study noted that while Chinook are the most nutritionally important salmon species for Cook Inlet belugas, belugas still rely on other salmon species as important prey.⁶⁹ Moreover, a recent 2023 study by McHuron et al. found that if there is enough prey abundance for Cook Inlet belugas, the whales can withstand other intermittent stressors, concluding that increasing prey availability increases the beluga’s resiliency to threats.⁷⁰ Another recent 2023 study by Warlick et al. stated that “aerial

⁶⁰ 76 Fed. Reg. 20,203, 20,214 (Apr. 11, 2011).

⁶¹ National Marine Fisheries Service, Recovery Plan for the Cook Inlet Beluga Whale at III-13 (2016).

⁶² NOAA Fisheries, Species in the Spotlight – Cook Inlet Beluga Whale, Priority Actions 2021-2025 at 14 (Apr. 21, 2021).

⁶³ 88 Fed. Reg. 76588 (Nov. 6, 2023).

⁶⁴ *Id.*

⁶⁵ Wild, Lauren A. et al., Biologically Important Areas II for cetaceans within U.S. and adjacent waters – Gulf of Alaska Region, 10 *Front. Mar. Sci.* 1134085 (May 5, 2023); Harrison, Jolie, Biologically Important Areas II for cetaceans within U.S. and adjacent waters – Updates and the application of a new scoring system, 10 *Front. Mar. Sci.* 1081893 (Mar. 14, 2023).

⁶⁶ Norman, S. et al., Relationship between per capita births of Cook Inlet belugas and summer salmon runs: age-structured population modeling, 11 *Ecosphere* 1 (2020).

⁶⁷ *Id.* at 1, 9.

⁶⁸ *Id.* at 10 (emphasis added).

⁶⁹ *Id.*

⁷⁰ McHuron, Elizabeth A. et al., Modeling the impacts of a changing and disturbed environment on an endangered beluga whale population, 483 *Ecological Modeling* 110417 (Sept. 2023).

survey data suggest that the [Cook Inlet beluga] population continues to decline[, and the] leading hypotheses include reduced prey availability [...].”⁷¹

The proposed nominal flow releases from the AWWU Portal will only minimally enhance Chinook and coho salmon and their habitat in the lower Eklutna River. The AWWU Portal provides no solution for the complete blockage of salmon reaching the extensive lake spawning habitat required by sockeye salmon and miles of upper tributaries spawning habitat above the lake that is highly amenable to Chinook and coho salmon, both of which are primary forage species for Cook Inlet belugas.⁷² Without connection to Eklutna Lake, protecting, mitigating, and enhancing those key spawning grounds and habitat is impossible. In turn, the mitigation and enhancement for Cook Inlet beluga whales are likely to be minimal as well. Furthermore, no analysis was completed for how the other alternatives considered would benefit Cook Inlet belugas.

The Draft Program’s severely inadequate analysis of non-salmonid fish and wildlife fails to meet the purposes of the Agreement and the standard of a similar federal process, and severely inhibits the Governor’s ability to make an informed decision.

H. The Draft Program Does Not Provide Specific Information Regarding Additional Requirements for the Draft Program or Any Alternatives

The Draft Program states that there may be additional requirements to implementing the Program, including the potential need to secure permits, land rights, easements and Amendment of ADL 44944.⁷³ The Draft Program also states required tax increases approved by the Anchorage Assembly and CEA and MEA rate increases that must be approved by the Regulatory Commission of Alaska. However, it does not describe any strategies the Project Owners have developed for securing necessary permits, land rights, or tax and rate increase approvals for the Draft Program or any alternatives. Instead, the Draft Program document flatly states, “[s]hould any of these requirements fail to be achieved, the Project Owners will not be able to execute on the Fish and Wildlife Program.”⁷⁴

The one binding approval the Project Owners to have appeared to have secured is with AWWU for the use of the AWWU pipeline.⁷⁵ This binding agreement should be made public under section 3 of the 1991 Agreement, especially because it appears to have been signed before the release of the Draft Program during the Study Plan period. Yet, the Project Owners have declined to provide this to the public after numerous requests from NVE, the Anchorage Assembly, and others. Without this binding agreement, the public was not able to fully provide

⁷¹ Warlick, A.J. et al., Identifying demographic and environmental drivers of population dynamics and viability in an endangered top predator using an integrated model, *Anim. Conserv.* (Oct. 6, 2023).

⁷² See, e.g., Native Village of Eklutna, Eklutna Lake and Tributaries Salmon Habitat (2024); See also, McMillian Jacobs Associates, Eklutna Lake Aquatic Habitat and Fish Utilization, Year 2 Study Report Final (2023); See also, Native Village of Eklutna, TWG 2021-2022 Final Report.

⁷³ See Eklutna Draft Fish and Wildlife Program at 81.

⁷⁴ *Id.*

⁷⁵ See, Project Owners, Letter to Anchorage Assembly Re: AR No. 2024-40: Corrections and Responses at 6 (Feb. 12, 2024).

testimony and comment on the Draft Program. We believe the withholding of this document is unlawful on the 1991 Agreement. We request the Project Owners release this agreement with AWWU immediately.

Further, there is no basis for the Project Owners' suggestion that their inability to satisfy any "additional requirements" for implementation of the Program is a legitimate basis for their non-performance under the Agreement. Instead, the likelihood of the Project Owners being able to secure permits and property rights necessary for successful implementation of the Draft Program and reasonable alternatives is relevant to the alternatives analysis.

Based on our review, there are several issues related to the Project Owners' ability to secure permits for the Draft Program. The 15% design drawings included in the Draft Program show that the construction of the proposed AWWU Portal would include construction of above ground utility infrastructure as well as eight new bridges and road improvements for the AWWU water supply access road within Chugach State Park. Such construction within the State Park would be a "conversion" of Land and water Conservation Fund property requiring approval by the Department of Interior ("DOI").⁷⁶ Further, any DOI decision approving conversion would be a federal action requiring compliance with NEPA and ESA section 7.

Additional review of the 15% design drawings shows that the Draft Program includes the addition of riprap fill material directly into the Eklutna River channel at the location of the AWWU Portal discharge, which would be subject to compliance with Clean Water Act section 404 and may require an individual permit from U.S. Army Corps of Engineers. Such permitting decisions would also be a federal action subject to compliance with NEPA and ESA section 7.⁷⁷

The Project Owners need to address these and any other permitting requirements and pathways for the proposed AWWU Portal as compared to dam removal and any other reasonable alternatives for the Parties, the public, and the Governor to make informed comments and decisions, respectively.

III. Interpretation of the Right to Judicial Review Limitation is Inappropriate and Unsupported

The Draft Program states that "Pursuant to the 1991 Agreement and APA Asset Sale Act, the Governor's decision regarding the provisions of the Final Fish and Wildlife Program is reviewable and enforceable by the Parties in the U.S. District Court for the District of Alaska."⁷⁸ We dispute this as a statement of the Project Owners' opinion, which has been misleadingly presented as a formal conclusion without any legal basis. Neither the APA Asset Sale Act nor the

⁷⁶ See Eklutna Draft Fish and Wildlife Program at Appendix E; *see also*, 36 C.F.R. § 59.3; *see also*, Alaska Department of Natural Resources, Chugach State Park Management Plan at 31-32 (Feb. 2016) ("All of Chugach State Park is considered an LWCF protected area and is subject to the program provisions. Any property within an LWCF protected area may not be wholly or partly converted to anything other than public outdoor recreation uses without the prior approval of the Secretary of the U.S. Department of the Interior." "Actions that may represent a conversion of use include installation of [...] above ground utilities, development of roads for primary purposes other than recreation [...]").

⁷⁷ See Eklutna Draft Fish and Wildlife Program at Appendix E; *see also*, 33 U.S.C. § 1344.

⁷⁸ Eklutna Draft Fish and Wildlife Program at 17 (emphasis added).

Agreement limit judicial review to the Parties, and any such limitation would appear to violate principles of due process given, separate and apart from the enforceability of the Agreement as a contract between the Parties, the Governor’s final decision on the Fish and Wildlife Program would affect rights and interests far beyond those of the individual Parties, including members of the Center.⁷⁹

IV. Concerns Regarding the Project Owners Preferred Alternative Must Be Fully Analyzed

The Project Owners’ “AWWU Portal Valve” preferred alternative is rife with issues that qualified, reputable, and independent experts have highlighted.⁸⁰ The Project Owners must fully analyze and understand these issues, as well as provide a plan for addressing them, before making any further decisions.

V. Adequate Dam Removal Analysis

Adequate analysis a dam removal alternative must be based on the following conditions and assumptions and must correct the following inaccuracies.

A. Dam Removal Only Once Alternative Sources of Renewable Energy Are Available

The dam removal analysis should presume that dam removal will only occur once alternative sources of renewable energy are available, such as the 65MW Dixon Diversion expansion of the Bradley Lake hydroelectric project, large-scale wind and solar energy projects, required enhanced grid efficiencies on the Railbelt through coordinated dispatch,⁸¹ and increased consumer and commercial energy efficiency. It should be noted that there are no proposals or requests for analysis of dam removal that takes place before these conditions are met, and we are not requesting analysis of dam removal that would require Eklutna hydroelectric power to be replaced by methane gas.

B. AWWU Water Withdrawals and Downstream River Flow Concerns with the Eklutna Lake Dam Removed

The Project Owners have recently claimed that without the Eklutna Lake dam, AWWU water withdrawals in the winter months could cause flows out of the lake to cease and the river to run dry.⁸² This analysis, and the modeling upon which it is based on, has never been presented to stakeholders, fish and wildlife agencies, or independent experts for verification, review, and feedback. Based on our initial review, we believe this analysis is highly misleading and based on incorrect assumptions. Moreover, we believe that even if the concern has some limited validity, there are highly feasible engineering solutions available to resolve the issue. Dam removal

⁷⁹ See Pub. L 104-58, title I § 104(c)(1); Fish and Wildlife Agreement at 5.

⁸⁰ See, Spiegel, Donald, Executive Summary: Eklutna River Restoration Project Issues Paper (Feb. 14, 2024); See also, Spiegel, Donald, Project Issues Paper: Eklutna River Restoration Project (Feb. 24, 2024); See also, Anchorage Assembly, Letter to Eklutna Hydroelectric Program Development Team (Feb. 16, 2024).

⁸¹ Alaska SB 123 (2020); Regulatory Commission of Alaska, Order R-20-001 (May 18, 2020).

⁸² McMillen, Eklutna Fish and Wildlife Program Chugach BOD Meeting Slides (Feb. 12, 2024).

analysis must be based on accurate AWWU withdrawal figures and vetted flow models, and include engineering solutions to downstream flow concerns.

The AWWU water withdrawal rates the Project Owners are basing their assumptions on are misrepresented. The AWWU system experiences maximum usage during the summer months of June and July (occasionally August), during weeks of hot summer weather. Water usage in winter months is significantly lower than in summer. This is very typical for systems in places like Anchorage that are not winter resort or heavily visited winter season areas (rather Anchorage is experiences a very significant influx of people during the summer months). Based on the historical record, AWWU production from Eklutna is as follows:

- Average annual production (average day for the year) is about 21 mgd (32 cfs)
- Minimum month production (November – January) is about 19 mgd (29 cfs)
- Maximum month production (June – July) is about 27 mgd (42 cfs)
- Maximum day production is about 32 to 33 mgd (50 to 51 cfs)

These production rates align with average rates for municipal and industrial water usage in municipalities nationwide. These rates show the significant increase in withdrawals and production in the summer months compared to the winter.

In a recent presentation by the Project Owners’ consultant to the Chugach Electric Association Board of Directors, the consultant presented AWWU withdrawals as stable over the course of the year, stating that “With AWWU pulling their maximum water right of 41 MGC (63.4 cfs). The [sic] river would run dry most winters.”⁸³ Based on historical averages, AWWU does not come close to withdrawing 63.4 cfs, even during maximum day production during hot summer weeks. And the rate of production is certainly not flat over the course of the year. These kinds of misleading presentations of data, along with no references as to the source of their data nor any presentation on the modeling upon which their flow calculations are based upon, call into question the reliability of their data and analysis.

Furthermore, there are highly feasible engineering solutions available to ensure that the Eklutna River can remain watered and AWWU can maintain withdrawals during winter months in dry years. For example, a potential solution would be to install a manhole (cylinder) pump station near the location of the existing dam that would intake water from the west end of the lake near the current dam and release it near the base of the current dam spillway structure. This pump station would allow continued flow in the Eklutna River during winter months in dry years while allowing continuous AWWU withdrawals of their historic averages (and up to their maximum water right). The exact locations of the pump station, suction pipe, and location of discharge pipe should be based on study of the profile and geology of the bottom of Eklutna Lake. AWWU has numerous cylinder pump stations of similar configurations in operation today, and cylinder pump stations are very common in sewer and drainage projects around the country and the world.

⁸³ McMillen, Eklutna Fish and Wildlife Program Chugach Board of Directions Meeting Slides (2024).

C. Costs of Dam Removal

The Project Owners have compared the potential costs of removing the Eklutna Lake dam to such projects as the Elwha and Glines Canyon dam removal project (more than \$350 million) and Lower Klamath River dams removal project (estimated at \$397 million). Those dam removal projects are categorically different and larger than removing the Eklutna Lake dam. For example, the Lower Klamath River dams removal project is the largest dam removal project in the world, including removing four dams on one of California's largest river systems and restoring thousands of acres of land previously inundated by four completely unnatural reservoirs. The lower Eklutna dam was removed for \$7.5 million which was a far more difficult and complex, and thus expensive, project than what it would cost to remove the Eklutna Lake dam. Costs must be accurately analyzed for dam removal of the Eklutna Lake dam.

D. Eklutna Lake Level and Resultant Spawning Habitat

The analysis should assume that once the Eklutna Lake dam has been removed, Eklutna Lake must be kept sufficiently full and spilling into the Eklutna River, except for short time periods in rare winter months during dry years (and we suggest an engineering solution to address those rare periods). This means that the Eklutna Lake level must not fall below 851 feet such that all available lakeshore spawning habitat always remains inundated. In other words, the analysis must properly account for all available lakeshore sockeye spawning habitat under "full lake" conditions. Moreover, the analysis must properly account for the full mileage of available spawning habitat in the tributary streams above the lake.

E. Peak Flow Assessments

The Project Owners have stated in numerous presentations and letters that removal of the dam would result in flows below the lake "peaking at 2,500 cfs every few years to 4,000 cfs every ten years." In their 2019 Eklutna River Flow Assessment, USFWS's data shows that flows of 2,500 cfs and 4,000 cfs would be far less regular than every "few" to ten years, respectively. Rather, at the extremes, it shows the likelihood of 2,500 cfs flows are between ~5-50 years, and the 4,000cfs likelihood interval is between ~20-500+ years, with an annual probability of 0.2%.⁸⁴

We contest the inflated peak flow numbers the Project Owners are using and the models upon which these flow estimates are being generated. These numbers and models are being used for subsequent dam removal analysis by the Project Owners' consultant and AWWU, and these analyses must therefore be called into question. We suggest consulting with the fish and wildlife agency experts, as the 1991 Agreement requires, and resolving any differences in models and flow estimates before any further analysis is completed. If differences remain, the fish and wildlife agency experts flow estimates for analyzing lower river flows after removal of the dam should be used.

F. Downstream Bridge Safety

⁸⁴ USFWS, Preliminary Fish Habitat Flow Assessment at Appendix B (July 14, 2019).

The Project Owners' have stated concerns about downstream bridge safety from peak flow events once the dam was removed. There are three main bridges below the Eklutna Lake dam: the Old Glenn Highway Bridge, the New Glenn Highway Bridges, and the Railroad Bridge.

The Old Glenn Highway Bridge was replaced in 2015. The Project Owners have stated without citation that this bridge's maximum hydraulic capacity is less than 1,800 cfs.⁸⁵ This is false and highly misleading. We assume that the Project Owners are basing this estimate on the 2015 Eklutna River Bridge Hydrologic and Hydraulic Report.⁸⁶ This report explicitly does not state that the bridge's maximum hydraulic capacity is less than 1,800 cfs. Rather, the analysis for the hydraulic capacity of the bridge only considered flows up to 1,800 cfs because the report considered 1,800 cfs the 500-year flood level with the dam in place. Using this report to state that the hydraulic capacity of the Old Glenn Highway Bridge is less than 1,800 is patently false. The correct conclusion of this report is that the new Old Glenn Highway Bridge has a hydraulic capacity of at least 1,800 cfs. The analysis can be implied to conclude that 4,000 cfs peak flows would be well within the new bridge's hydraulic capacity and would likely have no impact on the bridge, especially given the predicted infrequency of these peak flows. A supplemental hydraulic report would be required to accurately state the maximum hydraulic capacity of the bridge with the Eklutna Lake dam removed.

The Project Owners' Draft Program states that the New Glenn Highway Bridges, which were constructed in 1975, have a hydraulic capacity of less than 4,700 cfs.⁸⁷ There is again no citation for this statistic, and we wonder what analysis this figure relies upon. Nonetheless, given the Project Owners' estimated peak flows of 4,000 cfs, the New Glenn Highway Bridges have ~17% of additional hydraulic capacity and should not be negatively impacted by maximum peak flows. The Draft Program states that the Railroad Bridge has a hydraulic capacity of less than 8,000 cfs (also without citation). This is more than double the estimated peak flows. Without additional analysis that shows otherwise, we see no reason why the current downstream bridges cannot withstand peak flows from an undammed Eklutna River.

Additionally, the Project Owners have stated concerns about sediment transport during peak flow events from remaining sediment that was once trapped behind the lower Eklutna dam that was removed in 2018. Our proposed dam removal alternative advocates for the Eklutna Lake dam being removed within the next decade. There are abundant examples of dam removal projects that have safely addressed sediment transport and downstream infrastructure at a scale far greater than in the Eklutna, and the Project Owners' dam removal analysis should explore these examples and provide for a managed sediment reduction program before dam removal through planned flushing flows and other mechanisms.

G. AWWU Pipeline Scouring

The lower Eklutna River is certainly not the only river under which a pipeline flows, and while the Project Owners have cited scouring concerns, we request to see full analysis of these

⁸⁵ Project Owners, Eklutna Draft Fish and Wildlife Program at 8.

⁸⁶ R&M Consultants, Eklutna River Bridge Hydrologic and Hydraulic Report (Mar. 2015).

⁸⁷ Draft Program at 8.

purported issues and how they could be addressed. This analysis must be based on a river routing model at credible design flows to determine scour velocities and depths of the AWWU pipeline. The results of this model may show that there are no additional protection measures required to secure the AWWU pipeline. If the model shows the need for additional protections, the analysis must explore a wide range of options for addressing such scouring concerns. These options could include additional armoring, digging pipeline sections deeper, a combination of techniques, or any other treatments recommended by a pipeline expert. We feel confident there are highly feasible solutions to address these concerns.

H. Dam Removal Benefits to All Fish and Wildlife

The dam removal analysis must consider the benefits to salmon of not just reconnecting the lower river to the lake and upper tributaries, but also returning a more natural flow regime to the lower river, including all side channels and off-channel habitat. Moreover, as we discussed at length in our December 2023 comments on the Draft Program, the 1991 Agreement protection, mitigation, and enhancement requirements extend to all non-salmonid fish and wildlife in the Eklutna watershed. As such, the dam removal analysis must meaningfully analyze the impacts, especially the positive benefits, to all fish and wildlife. This includes the benefits of a restored natural flow regime along with sediment transport and restored off-channel habitat on shorebirds that use the Eklutna estuary and other birds in the watershed as well as terrestrial and marine mammals. In particular, the dam removal analysis must fully analyze the benefits of dam removal and potential resultant salmon abundance increases for Cook Inlet beluga whales, a critically endangered species listed under the federal Endangered Species Act.

VI. The Project Owners Should Agree to a Multi-Year Extension

We fully support and encourage the Project Owners and Parties to the 1991 Agreement to undertake a multi-year extension for further study, analysis, and resolution of differences before proposing a Final Fish and Wildlife Program.⁸⁸ The 1991 Agreement, as essentially a standard contract, can be revised, including its scheduled dates, with the agreement of all signatories.

Sincerely,

/s/ Cooper Freeman

Cooper Freeman

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⁸⁸ Anchorage Assembly, AR No. 2024-40, As Amended (Feb. 2, 2024).