Responses to Comments from the Parties and NVE on the Draft Program

No.	Entity	Page	Section, Table, or Figure	Comment	Response
1.0 Introduction					
1	ADNR	Page 11	Section 1.1.1.9 Water Rights	I suggest a couple changes to the second paragraph on page 11. Though AWWU's permit term expires, they will apply for a certificate of appropriation by submitting a statement of beneficial use. Alaska uses a two step program for high volume water rights where applicants are issued an initial permit for a limited term, then they submit a statement of beneficial use claiming their actual water use. After that they are issued a "certificate of appropriation." I suggest we replace "license" with "permit" and add to the sentence after "LAS 2569 expires…" to make it clear that AWWU will have a water right.	The following changes (underlined text) were made to the Supporting Information Document: *"Further, MOA and APA worked with Congress to amend the Eklutna Project Act to reflect the additional public water usage of the Eklutna Lake which was otherwise reserved for the purposes of the Project. MOA also obtained a 40-year <u>permit to appropriate water</u> from the State of Alaska to utilize water from Eklutna Lake, referred to as "LAS 2569." LAS 2569 expires on December 31, 2025 <u>and will be replaced with a certificate of appropriation</u> . In addition, the original 1950 federal legislation authorizing construction of the project was amended to "grant the appropriation of water for the purposes of public water supply in accordance with the same compensation agreement."*
2	Eklutna, Inc.	Page 14	Energy Generation and Cost of Power	The stated need for the continuing existence of the Eklutna Project is the economic value of damming the River. The Program states the Eklutna Project is the lowest-cost energy source in the MEA and Chugach systems. The Program indicates the electricity is generaged at $85/MWh. Recently, it was reported that the Houston Solar project power was purchased at $65/MWh. We understand solar is an intermittent energy generation souce, and a firm power source such as natural gas or hydroelectric is preferred, but it would be helful for the Program to provide additional analysis on claims such as this.	Eklutna is the lowest-cost energy source, generating electricity at $13/MWh. $85/MWh is the replacement energy cost (see Section 4.10.1 Supporting Information Document).
3	USFWS	Page 15	Section 1.2 1991 Fish and Wildlife Agreement	The 1991 Fish and Wildlife Agreement (1991 Agreement) was developed in response to resource agency concerns over the loss of a sockeye salmon (*Oncorhynchus nerka*) run that once spawned in Eklutna Lake(AEA 1992). According to the Environmental Assessment (EA; AEA 1992), the loss caused by the 1929 development project and the desires of the fish and wildlife agencies to provide appropriate consideration to fish and wildlife resources led to agencies' initial recommendation that the Project be placed under Federal jurisdiction. The 1991 Agreement process was intended to be as protective as the Federal Power Act (FPA) such that it would obviate the need for the Federal Energy Regulatory Commission (FERC) licensing process . The 1995 Alaska Power Administration Sale Act addressed the sale of the only two assets administered by the Alaska Power Administration (APA), the Eklutna and Snettisham Projects, and directed the Secretary of Energy to terminate the APA. Mitigation commitments were required for the divestiture; specifically. The Fish and Wildlife Agreement ensured protection and enhancement of fish and wildlife and protection of cultural resources that may be identified in the future, making it legally enforceable.	Thank you for your comment.

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4	USFWS	Page 15	Section 1.2 1991 Fish and Wildlife Agreement	According to the 1991 Agreement and subsequent EA, the Project Owners are required to develop future environmental studies to quantify impacts and develop proposals for the protection, mitigation, and enhancement of fish and wildlife affected by such hydroelectric development. The overarching goal of the 1991 Agreement is for the Eklutna Owners to work in consultation with resource agencies to quantify the impacts of the Eklutna Hydropower Project on fish and wildlife resources and to develop and implement a Fish and Wildlife Program with measures to protect, mitigate damages to, and enhance (PME) fish and wildlife (including related spawning grounds and habitat) affected by the Eklutna Project6 (AEA 1992). The 1991 Agreement was intended to provide a means to identify and address fish and wildlife issues post-sale.	Section 4.0 of the Supporting Information Document details the steps the Project Owners have taken to comply with the 1991 Agreement, including the environmental studies that have been conducted; development of protection, mitigation, and ehancement measures; and consultation with resource agencies and NVE.
5	USFWS	Page 15	Section 1.2 1991 Fish and Wildlife Agreement	While the 1991 Agreement was intended to be as protective as the Federal licensing process and therefore obviate the need for licensing by FERC; however, there are some significant disparities between what has occurred and would have occurred under FERC licensing. Under the FERC process, section 18 of the FPA would have provided the Service and National Marine Fisheries Service (NMFS) with authority to issue fishway prescriptions. Section 10(j) of the FPA would have required license conditions for protection, mitigation of damages to, and enhancement of fish and wildlife resources and related habitat based on recommendations from Federal and State fish and wildlife agencies, pursuant to the Fish and Wildlife Coordination Act. Section 10(j) recommendations typically address water quantity, water quality, instream flows, ramping rates, and habitat management, and may also include recommendations for the development and improvement of fish and wildlife in the project area. Under the FPA, FERC would then have considered any rejected Section 10(j) conditions as Section 10(a) recommendations. During analysis under the National Environmental Policy Act, FERC would have analyzed direct, indirect, and cumulative impacts of the project, including impacts from the 1929 dam and the connected actions of Eklutna dam construction and redesign. Furthermore, the Federal licensing process would have allowed for official government to government consultation between Federally Recognized Tribes and FERC. Instead, the concerns of Native Village of Eklutna regarding the loss of culturally important resources are given equal consideration as other beneficial uses such as impacts to recreation.	The 1991 Agreement is the guiding document that the Project Owners have followed in development of a Fish and Wildlife Program. The Project Owners are contractually and legally bound by the terms of the 1991 Agreement. Regarding NVE, the Project Owners committed to a review and participation framework that ensures information NVE and its members share regarding the Eklutna River and development of the Fish and Wildlife Program is appropriately considered and addressed. The Project Owners have valued the unique perspective of NVE regarding the EKlutna River. Section 4.0 of the Supporting Information Document details the Project Owners compliance with the 1991 Agreement and Appendix A of the Supporting Information Document includes a record of meetings with the NVE Tribal Council, including meetings with the Boards of Directors for both CEA and MEA and the Anchorage Assembly.
6	USFWS Enclosure	Page 15	Section 1.2 1991 Fish and Wildlife Agreement	As drafted, we believe the Program does not entirely meet the intent of the 1991 Agreement, which was established in part due to of concerns for the sockeye salmon (*Oncorhynchus nerka*) run, and which was expected to be as protective as the Federal licensing process. Instead, the U.S. Fish and Wildlife Service (Service) recommends a phased approach which sets interim terms or benchmarks to spur incremental progress towards a long-term and mutually agreeable solution that ultimately provides fish passage at the dam and instream flows capable of supporting fish and wildlife into the future.	The Project Owners believe the Proposed Final Fish and Wildlife Program does meet the intent of the 1991 agreement. In the Proposed Final Program, the Project Owners have included limited reopeners for a fixed wheel gate and fish passage in recognizition that fish passage to Eklutna Lake may become feasible in the future and fish passage is important to NVE, the federal and state agencies, and others who have commented on the Draft Program (see Section 4.0 of the Proposed Final Fish and Wildlife Program regarding the limited reopeners).

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7	USFWS Enclosure	Page 15	Section 1.2 1991 Fish and Wildlife Agreement	Overall, to meet the intent of the 1991 Agreement, we believe the Final Fish and Wildlife Program should include the following: 1. Provide water to the full length of the river on a year-round basis. 2. Provide a long-term solution to get marine derived nutrients from the river to the lake. We have expressed openness to a phased approach in returning sockeye salmon to the lake. The Final Program should provide a commitment to design a phased approach within 5 years of the Final Program. 3. Include methods to facilitate larger channel maintenance flows from the lake, such as a new gate at the dam. 4. Include a higher instream flow regime to increase downstream salmon rearing habitat; the channel maintenance flow regime should be increased commensurate with the increased instream flow regime. 5. Include a summary section in the Program or Draft Summary of Study Results that provides quantification of acres impacted, where possible. 6. Include physical habitat manipulation in both the Program and the Adaptive Management Plan. 7. Provide more flexibility in the Adaptive Management Plan so that PMEs can be implemented as effectively as possible.	1. See response to comment # 103 2. See response to comment # 107 3. See response to comment # 75 4. See response to comment # 102 5. See response to comment # - see response to Summary of Study Results comments 6. See response to comment # 121 7. See response to comment # 99
8	NVE	Page 15	Section 1.2 1991 Fish and Wildlife Agreement	The purpose of the 1991 Eklutna Fish and Wildlife Agreement ("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 Project. Salmon spawning grounds and habitat harmed by the project include the lower Eklutna river below the dam, Eklutna Lake, and the upper tributaries to Eklutna Lake. The Divestiture Summary Report for the Sale of Eklutna and Snettisham Hydroelectric Projects ("Divestiture Report"), to which the Agreement is an appendix, notes that mitigating harms to sockeye salmon and their spawning habitat was particularly important in creating the Agreement. The Divestiture Report explained that "[d]uring reviews of the legislative proposal, loss of a sockeye 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." 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.	The Project Owners have engaged in a 5-year process of studies and evaluation of alternatives in consultation with the Parties to the 1991 Agreement, NVE, Eklutna Inc., and other stakeholders. That effort included the evaluation of potential measures to improve habitat conditions for sockeye. The results of that evaluation are included in the Alternatives Analysis as well as the later Dam Removal technical memorandum (Appendix F, Supporting Information Document).

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9	NVE	Page 15	Section 1.2 1991 Fish and Wildlife 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." 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)." 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. 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)."	We disagree. Our efforts have focused on generating relevant information to allow an informed decision by the Governor in determining an appropriate set of PME measures that would meet all of the eight criteria included in the 1991 Agreement. An appropriate approach to assisting the Governor was to conduct the alternatives analysis which allows the Governor to see the differences in impacts to fish habitat, water supply and hydropower generation, along with related costs for a variety of potential PME packages.
10	NVE	Page 15	Section 1.2 1991 Fish and Wildlife Agreement	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. 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. They are neither qualified nor authorized to make policy determinations and have plain conflicts of interest. This calls into question the integrity of the entire Draft Program and its ability to meet the Agreement's purpose.	The Project Owners agree that it is the Governor's responsibility to review the Proposed Final Program while giving equal consideration to the criteria listed in the Agreement as stated in the Supporting Information Document. The Project Owners have not made policy determinations but have fully met the procedural and schedule requirements of the 1991 Agreement to date as described in Section 4.0 of the Supporting Information Document.

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11	NVE	Page 15	Section 1.2 1991 Fish and Wildlife Agreement	The Draft Program fails to meet the fundamental purpose of the Agreement and steps far beyond fish and wildlife considerations laid out in the Agreement. The AWWU Portal plan 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. Furthermore, the flows the Project Owners propose to release from the AWWU Portal are the minimum flows considered by any of the parties during the Agreement study process, with small high-flow events in only three out of every ten years. This proposal provides no solution for the complete blockage of salmon reaching the extensive lake spawning habitat required by sockeye salmon (which was the key driver for the Agreement in the first place), and 15 miles of upper tributaries spawning habitat above the lake that is highly amenable to Chinook and coho salmon completely stranded Without a connection to Eklutna Lake and upper tributaries, restoring 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." 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 Project Owners believe the Proposed Final Fish and Wildlife Program does meet the intent of the 1991 agreement. The Proposed Final Fish and Wildlife Program includes a limited reopener for fish passage.
12	NVE	Page 15	Section 1.2 1991 Fish and Wildlife Agreement	Instead of focusing on the most beneficial program for fish and wildlife, the Draft Program is primarily concerned with implementation costs, along with impacts on power generation, ratepayers, and drinking water. The Program states that the AWWU Portal is the "most costeffective" alternative in its rationale for choosing that option. Cost-effectiveness is not a primary consideration in the Agreement, nor one of the eight factors the Governor must consider in his decision. The Draft Program's incorporation of aspects far beyond fish and wildlife takes the task of balancing considerations away from the Governor and places them in the hands of the Project Owners. This is a significant conflict of interest that was intended to be avoided by the clear language of the Agreement. The Draft Program should have been concerned only with protecting, mitigating, and enhancing fish and wildlife habitat, and its failure to do so resulted in a thoroughly flawed Draft Program.	We disagree. See response to Comment # 9.

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13	NVE	Page 15	Section 1.2 1991 Fish and Wildlife Agreement	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." The Agreement process was intended to work "at least as well" for fish and wildlife as a FERC relicensing process. 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 process are manifested in a Draft Program that will not provide adequate or equitable protection, mitigation, and enhancement of fish and wildlife in the Eklutna watershed that have been adversely impacted by the Project. These 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. Alaska's Congresswoman Mary Peltola unambiguously states that "[t]he intent of Congress was clear: [the Project Owners] must mitigate for drying up the Eklutna River for the past 70 years."	The 1991 Agreement did not require the Owners to conduct their efforts in a manner identical to a FERC relicensing process. If that was the intent of the 1991 Agreement that could have been explicitly stated. Rather, the 1991 Agreement included a specific set of requirements including procedural, schedule, consultation, study and engagement with both the Parties to the Agreement and the public. The Owners efforts to comply with those requirements are documented in Section 4.0 of the Supporting Information Document and on the project website (eklutnahydro.com).
14	NVE	Page 15	Section 1.2 1991 Fish and Wildlife Agreement	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. 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.	The process required by the 1991 Agreement is not identical to a FERC proceeding, however if it were, FERC also requires that the analysis of impacts and potential PME measures be compared to the existing environment as the baseline condition.

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15	NVE	Page 15	Section 1.2 1991 Fish and Wildlife Agreement	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 NMFS and 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. 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. NMFS would consider the fishery management plan for Pacific salmon as a comprehensive plan for considering mitigation and enhancement for salmon in this process.	The 1991 Agreement is the guiding document that the Project Owners have followed in development of a Fish and Wildlife Program. The Project Owners are contractually and legally bound by the terms of the 1991 Agreement.
16	NVE	Page 16	Section 1.2.1 Procedural Requirements	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." 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 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.	The United States District Court for the District of Alaska has exclusive jurisdiction to review decisions made under the 1991 Agreement and to enforce its provisions. Federal law controls the interpretation of a contract entered pursuant to federal law when the United States is a party. Under federal common law, only a party to a contract or an intended third-party beneficiary may sue to enforce the terms of a contract or obtain an appropriate remedy for breach. Simply because the 1991 Agreement incidentally benefits various third parties does not mean that those third parties are intended third-party beneficiaries with rights to enforce the Agreement's provisions.

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17	NVE	Page 16	Section 1.2.1 Procedural Requirements	NVE has serious concerns about the Project Owners' proposed dispute resolution procedures. The Agreement requires that "[i]f USFWS, NMFS, or the State Resource Management Agencies' comments or recommendations different from those of the [Project Owners], the [Project Owners] will attempt to resolve such differences, giving due weight to the recommendations, expertise, and statutory responsibilities of USFWS, NMFS, and the State Resource Management Agencies." We recently received notice from the Project Owners that they are proposing a 1.5-hour dispute resolution meeting on December 15th to meet this requirement. We have raised several dispute issues regarding the adequacy of the Project Owner's consultation process and the Draft Program in these comments. The Draft Program does not meet the express goals of the Agreement; more specifically, it will not mitigate the Project's impacts on fish and wildlife because it will not reconnect the lake and upper tributaries to the lower river, which is necessary to restore sockeye, Chinook, and coho salmon to the Eklutna. We expect the federal resource management agencies will also raise disputed issues regarding the AWWU Portal recommendation in the Draft Program. Furthermore, we have proposed an alternative – removing the dam within ten years – that should have been analyzed previously and must be analyzed now as part of the dispute resolution process. We struggle to see how such substantial divergence can be resolved in a single 1.5-hour meeting. We request the Project Owners provide meaningful, not pro forma, procedures to resolve the significant disputed issues. For example, we request the Owners anticipate the need to schedule additional meetings and that they also provide for an independent dispute resolution specialist to facilitate the dispute resolution process.	The Project Owners continued to meet with the agencies and NVE through April 2024 in an attempt to resolve differences.
18	NVE	Page 23	Section 1.3.4 Study Program	Yet, contrary to this well-established traditional ecological knowledge, 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. 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, and discounts the critical importance of the upper tributaries for Chinook and coho spawning habitat. This conclusion ignores the traditional ecological knowledge of NVE that the Project Owners are well aware of and which was shared throughout the Study Plan process. Instead, the Draft Program relies solely on Western scientific analysis based on current degraded conditions to justify the hypothesis of a small historic sockeye run, and does not duly weigh traditional knowledge of historic salmon populations in Eklutna lake and the tributaries above.	The Project Owners considered both traditional ecological knowledge (TEK) and scientific analysis during development of the Fish and Wildlife Program. TEK is acknowledged in both the Initial Information Package (available on the project website: eklutnahydro.com) and Section 4.11.9 of the Supporting Information Document.

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2.0 Alternatives Analysis					
19	NVE		New Proposed Alternative	To meaningfully meet the purpose of the Agreement, NVE proposes an alternative solution – removing the Eklutna Lake dam within ten years when sufficient renewable power generation is available to offset the lost power generation from dam removal. In 2011, the U.S. Army Corps of Engineers ("USACE") proclaimed that "[t]rue restoration of the Eklutna River ecosystem would require removal of both dams […]." The Eklutna Lake dam does not impound Eklutna Lake but merely increases lake storage capacity for hydropower generation. Doing so severs the connection between the lower Eklutna River, Eklutna Lake, and upper tributaries, blocking all outflow of water, drying up the Eklutna River, and decimating the salmon runs. Now that the lower Eklutna dam is gone, it is time to plan for a future with a free-flowing Eklutna River and salmon runs truly restored. NVE's alternative of dam removal within ten years will provide fish passage upstream and downstream to and from the lake and upper tributaries and return the river's natural flow regime that salmon co-evolved to depend upon, restoring the entire river and lake ecosystem. This proposal aligns closely with National Marine Fisheries Service ("NMFS"), US Fish and Wildlife Service ("USFWS"), and other Technical Working Group ("TWG") member's study period preferred alternatives with fish passage to and from the lake and flows that closely mimic the river's historic natural flow regime. The Conservation Fund has pledged to pay all the costs of removing the Eklutna Lake dam.	In response to NVE's proposed alternative of removing the Eklutna Dam, the Project Owners conducted a high-level analysis of the technical risks and cost implications associated with dam removal, including effects that an unregulated river hydrograph may have on infrastructure on or adjacent to the Eklutna River downstream of the existing dam. The use of other comparable renewable energy sources to determine how to offset the lost generation from the Eklutna Power Plant was also analyzed. This analysis is documented in a Technical Memorandum that is available in Appendix F of the Supporting Technical Document.
20	NVE		New Proposed Alternative	The benefits of removing the Eklutna Lake dam include: 1. Collectively addressing a century of cultural and environmental neglect; 2. Restoring the Eklutna River to flow naturally out of Eklutna Lake; 3. Re-connecting the river to the lake, allowing for the recovery of sockeye, Chinook, and coho salmon, opening up 65% of their available habitat in Eklutna Lake and its upstream tributaries; 4. Sparing CEA and MEA ratepayers and MOA taxpayers from rate and property tax hikes to pay $57 million to implement the utilities' proposed plan; 5. Avoiding lost generation capacity at the Eklutna hydroelectric facility for the immediate future; 6. Securing the AWWU drinking water system; and, 7. Protecting popular lakeside trails from erosion caused by fluctuating lake levels.	The high-level analysis of the technical risks and cost implications associated with dam removal conducted by the Project Owners (Appendix F, Supporting Information Document) show that not all the noted benefits of dam removal are accurate. Even if The Conservation Fund pays for the cost of dam removal, costs associated with power plant decommissioning, a new hydroelectric project, re-routing the AWWU pipeline, and highway and railroad bridge replacements would far exceed the cost of the Proposed Final Fish and Wildlife Program, resulting in increased costs to ratepayers and taxpayers. Dam removal would not secure the AWWU drinking water system but could pose risks to the system such as exposure and instability of the buried pipeline, inundation of the access and maintenance road along the river channel under annual peak flow scenarios, and potential for insufficient storage within Eklutna Lake to provide the historical water withdrawls year-round. Trail erosion may still occur due to wave action at high lake elevations which results in an undercut bank.

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21	NVE		New Proposed Alternative	To meet the purpose and requirements of the Agreement, we firmly believe that the Parties, the public, and the Governor must have the full range of options identified and analyzed for consideration. As we have previously requested, removing the Eklutna Lake dam within ten years when sufficient renewable power generation is available as an alternative that must be fully analyzed because it appears to be the only alternative that would effectively mitigate the Project's harms to fish and wildlife. In preparing these comments, we have confirmed The Conservation Fund's commitment to fully fund the removal of the Eklutna Lake dam. We ask that any analysis of this alternative reflect that the actual capital expenditure (CAPEX) cost to remove the dam is $0. The next schedule requirement per the Agreement is for the Governor to decide on the Final Program by Oct. 2, 2024, leaving plenty of time to fully analyze this alternative. Without analyzing this reasonable alternative, the Program would fail to meet the intent and requirements stated in the Agreement and the Divestiture Report and the Governor cannot make a fully informed decision.	In response to NVE's proposed alternative of removing the Eklutna Dam, the Project Owners conducted a high-level analysis of the technical risks and cost implications associated with dam removal, including effects that an unregulated river hydrograph may have on infrastructure on or adjacent to the Eklutna River downstream of the existing dam. The use of other comparable renewable energy sources to determine how to offset the lost generation from the Eklutna Power Plant was also analyzed. This analysis is documented in a Technical Memorandum that is available in Appendix F of the Supporting Information Document.
22	NVE		New Proposed Alternative	The Eklutna Project is the limiting factor preventing the restoration of the Eklutna River that flows from its headwaters to its confluence with the Knik Arm. Plainly, the Project Owners' Draft Program to maintain a dead-end river is inadequate to mitigate the Project's harms to fish and wildlife. Adequate and equitable fish and wildlife protection, mitigation, and enhancement, as required by the Agreement, requires the lake and upper tributary streams to be connected to the lower river and adequate flows for salmon to thrive. As such, we request that the Project Owners consider our proposed dam alternative to comply with the Agreement's purposes and provide a myriad of public interest benefits, including the long-term benefit of affordable energy from truly renewable sources.	In response to NVE's request, the Project Owners have considered the proposed dam removal alternative. Their analysis of this alternative is documented in a Technical Memorandum that is available in Appendix F of the Supporting Information Document.
23	Eklutna, Inc.	Page 35	2.4 Comprehensive Alternatives	Eklutna, Inc. is situated within the service areas of Matanuska Electric Association, Inc. (MEA) and Chugach Electric Association, Inc. (CEA). Eklutna, Inc is currently exploring alternative energy projects with both utilities that would augment energy generation from alternative/renewable energy sources. We believe it is worth exploring an option where the Eklutna Dam is removed once adequate renewable energy sources are commissioned to replace the production from the Eklutna Project. The country is seeing repeated success stories of salmon recovery after dam removal. The Eklutna people have given their lands and resources to Anchorage public water usage and electricity generation - the Eklutna Generation Station and the Eklutna Dam. We understand 90% of Anchorage's water and 90% of MEA's energy generation is attributable to these projects on or affecting Eklutna lands.	In their December 4, 2023, comment letter on the Draft Fish and Wildlife Program, NVE proposed a new alternative that involves removal of the Eklutna Dam. In response, the Project Owners conducted a high-level analysis of the technical risks and cost implications associated with dam removal, including effects that an unregulated river hydrograph may have on infrastructure on or adjacent to the Eklutna River downstream of the existing dam. The use of other comparable renewable energy sources to determine how to offset the lost generation from the Eklutna Power Plant was also analyzed. This analysis is documented in a Technical Memorandum that is available in Appendix F of the Supporting Information Document.

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24	NVE	Page 35	2.4 Comprehensive Alternatives	The Project Owners are not providing decision-makers and the public with the full range of alternative solutions and mitigation measures to meet the Agreement requirements. NVE has requested the Project Owners analyze alternatives that would restore connectivity of Eklutna Lake and upper tributaries to the lower river, including a formal request for analyzing removal of the Eklutna Lake dam on October 5, 2023, echoing The Conservation Fund's repeated and specific requests for evaluation of removal of the dam throughout the study plan and alternatives analysis process. The Project Owners rebuffed these requests based on a cost-benefit analysis and subsequent balancing test they are not qualified to undertake nor authorized to administer.	As an alternatives analysis is not required under the 1991 Agreement, the Project Owners were not required to bring a handful of alternative proposals to the public for public selection. Rather, Section 4 of the 1991 Agreement specifically requires the Project Owners to propose a Draft Fish and Wildlife Program to the parties of the 1991 Agreement (as done on October 27, 2023), work to resolve differences, hold public meetings, and consider comments and suggestions before preparing a Proposed Final Fish and Wildlife Program. The Project Owners believe they have gone well beyond the requirements of the 1991 Agreement in terms of engaging interested stakeholders, soliciting input, and presenting consistently analyzed alternatives information.
25	NVE	Page 35	2.4 Comprehensive Alternatives	Another significant deficiency in the consultation process has been the Project Owners' unilateral rejection of reasonable alternatives without rigorous study or analysis. 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. Here, by contrast, the Draft Program does not demonstrate the Project Owners adequately considered a reasonable range of alternatives proposed for analysis by the Parties, NVE, and other stakeholders. 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.	The Project Owners worked with the Parties to the 1991 Agreement, NVE, Eklutna Inc., and other stakeholders to identify a full range of alternatives. The Project Owners solicited alternatives from the Parties to the 1991 Agreement, NVE, Eklutna Inc., and other stakeholders, gave equal consideration to each alternative provided, and discussed each alternative with the Parties, NVE, Eklutna Inc., and other stakeholdersin a series of Alternatives Analysis meetings (Section 4.5, Supporting Information Document). The 1991 Agreement required the Project Owners to submit a Proposed Final Fish and Wildlife Program to the Governor, not alternatives.
26	NVE	Page 35	2.4 Comprehensive Alternatives	The Project Owners' exclusion of a dam removal alternative is an egregious error in the environmental analysis. 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. Other dams, like those on the Elwha River in Washington and the Klamath River in California, have been removed or are planned for removal as the most effective means for achieving restoration of salmon runs that have been decimated by 20th century dam construction and operation. Moreover, dam removal to restore fish passage and recover salmon is a NMFS priority action. Yet 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.	In response to NVE's proposed alternative of removing the Eklutna Dam, the Project Owners conducted a high-level analysis of the technical risks and cost implications associated with dam removal, including effects that an unregulated river hydrograph may have on infrastructure on or adjacent to the Eklutna River downstream of the existing dam. The use of other comparable renewable energy sources to determine how to offset the lost generation from the Eklutna Power Plant was also analyzed. This analysis is documented in a Technical Memorandum that is available in Appendix F of the Supporting Information Document.

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27	USFWS Enclosure	Page 37	Table 2-1	The Draft Program presents in Table 2-1 (p. 37) the preferred infrastructure modifications of stakeholders, with a footnote explaining the Service's alternatives C and D are in descending order of preference if public and financial support for alternative A and B are not obtained. In a letter dated July 3, 2023, we presented our preferred alternative, including our preferred engineering measures: *"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."* It was not our intent to suggest that engineering measures that do not provide fish passage would be acceptable on their own as part of the Fish and Wildlife Program. Our long-term goal has been ecological connectivity to the lake, and for the Fish and Wildlife Program to reflect that same goal.	Thank you for the clarification.
28	ADFG	Page 39	Table 2-2. Stakeholders' Preferred Instream Flow Regimes.	Footnote contains an incomplete sentence.	This will be fixed in future versions.
29	ADFG	Page 40	Table 2-4. Cost Summary for Stakeholders' Preferred Alternatives.	The difference in capital cost between ADF&G Alternative B and the proposed alternative is $19 million, but in Table 2.7 it appears that the incremental cost per acre of habitat gained is the same. Please clarify this discrepancy. We assume that the increased capital cost and other costs associated with ADF&G Alternative B is the additional cost of the installation of a fixed wheel gate at the dam. There is no cost analysis for the proposed fixed wheel gate in the draft plan. Please provide that analysis.	The $19 million difference is in present worth, not capital costs (see Table 4-7; Supporting Information Document). Regarding the incremental cost table in the Draft Fish and Wildlife Program - there were some errors in the data in the NVE row and the ADFG rows. This table has been corrected (Table 4-10, Supporting Information Document). The cost estimate for the fixed wheel gate is provided in Appendix C of the Supporting Information Document and phase 1 engineering deliverables are available on the project website at: eklutnahydro.com.

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30	ADFG	Page 41	Table 2-5. Ratepayer/Taxpayer Impacts for Stakeholders' Preferred Alternatives.	ADF&G is aware of the current situation regarding supply and demand of energy for the railbelt and the desire to maintain renewable energy sources to the maximum extent as well as the additional cost to ratepayers and property owners in Municipality of Anchorage (MOA) and ratepayers in the Mat-Su. As exhibited in Table 2-5, Page 41, implementation of ADF&G Alternative B would result in only a modest increase to ratepayers as compared to other alternatives considered while maximizing increases in habitat. In the 1991 Agreement, the purpose of this plan is to develop and propose to the governor a program to protect, mitigate damages to, and enhance fish and wildlife impacted by the project. ADF&G strongly encourages the Project Owners to consider adoption of ADF&G Alternative B, and specifically the construction of a fixed wheel gate at the project dam, to allow for flexibility of instream flows into the future.	The difference in increase to ratepayers from the Project Owners' Preferred Alternative to ADFG Alternative B is +0.53% to +0.76% for Chugach ratepayers, +0.84% to +1.13% for MEA ratepayers, and $0.51/100k to $0.81/100k property tax increase for MOA taxpayers (Table 4-8 of Supporting Information Document). The Project Owners have reconsidered construction of a fixed wheel gate to allow for flexiblity of instream flows in the future. The fixed wheel gate is included in the Proposed Final Fish and Wildlife Program as a limited reopener if certain criteria are met as outline in Section 4.1 of the Proposed Final Fish and Wildlife Program.
31	Eklutna, Inc.	Page 41	Table 2-5. Ratepayer/Taxpayer Impacts for Stakeholders' Preferred Alternatives.	Finally, we would like to see more details of ratepayer increases. The Program discusses the differences in perceived ratepayer increase. The public generally does not understand how rates increase and how the direct costs of a dam replacment, Portal release or dam removal actually materialize. Discussing how the rates will increase for water and electricity is essential to informing the public of a potential impact on their finances. A cursory estimate is inadequate for a public-facing document.	Details are included in Appendix C of the Supporting Information Document.
32	ADFG	Page 42	Table 2-6. Summary of Habitat Gains for Stakeholders' Preferred Alternatives.	ADF&G Alternative B provides an additional 1.4 acres of Chinook rearing habitat and 1.7 additional acres of coho rearing habitat. This is an increase of 22% and 17% respectively and is substantial compared to the proposed preferred alternative.	Comment noted.
33	ADFG	Page 43	Table 2-7. Incremental Costs Per Acre of Habitat for Stakeholders' Preferred Alternatives.	The incremental cost analysis per acre for ADF&G Preferred Alternative B is the same as the preferred alternative selected. It appears that the incremental cost is the same with a significant additional amount of rearing habitat (22% for Chinook and 17% for coho).	There were some errors in the data in the NVE row and the ADFG rows. This table has been corrected (see Table 4-10, Supporting Information Document).

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3.0 Draft Fish and Wildlife Program					
34	Eklutna, Inc.	Page 44	3.0 Draft Fish and Wildlife Program	It is extremely unusual for a preferred option to be advanced in a preliminary plan without fully evaluating each viable option. Typically, a suite of 3-4 options is identified, and each option is reviewed through a series of criteria, on a point-by-point basis, leaving the public with an opportunity to review the case for each option. Options forwarded by the federal agencies and the Native Village of Eklutna were not thoroughly evaluated under the same criteria the Portal option was given. For the Program to be legally defensible, a full evaluation of each option - now including dam removal - should be included in the Program.	As described in Section 4.5 of the Supporting Information Document, the Project Owners evaluated over 30 comprehensive alternatives. The proposed flow regimes, required infrastructure, and operations of each of the 30+ comprehensive alternatives were evaluated equally to determine annualized costs and their associated environmental benefits. Dam removal was not brought forward during the alternatives analysis process; however, the Project Owners have since conducted a high-level analysis of the technical risks and cost implications associated with dam removal, including effects that an unregulated river hydrograph may have on infrastructure on or adjacent to the Eklutna River downstream of the existing dam. The use of other comparable renewable energy sources to determine how to offset the lost generation from the Eklutna Power Plant was also analyzed. This analysis is documented in a Technical Memorandum that is available in Appendix F of the Supporting Information Document.
35	NVE	Page 44	3.0 Draft Fish and Wildlife Program	The AWWU Portal proposal provides no solution for the complete blockage of salmon reaching the extensive lake spawning habitat required by sockeye salmon (which was the key driver for the Agreement in the first place) and 15 miles of upper tributaries spawning habitat above the lake that is highly amenable to Chinook and coho salmon. Without a connection to Eklutna Lake, restoring those key spawning grounds and habitat is impossible. The Project Owners admit in the Draft Program that “no change in sockeye rearing habitat is anticipated.” The proposed nominal flow releases from the AWWU Portal, which represent less than 10% of the inflows to Eklutna Lake, will only minimally enhance Chinook and coho salmon and their habitat in the lower Eklutna River and bear no resemblance to historic flows.	The Project Owners recognize that fish passage is important to NVE, the federal and state agencies, and others who have commented on the Draft Program and that fish passage may become feasible in the future. Therefore, the Proposed Final Fish and Wildlife Program includes a limited fish passage reopener (Section 4.2). With this limited reopener, if a new, proven methodology or technology becomes available, then the Committee may reevaluate the potential for the construction and operation of fish passage facilities both into and out of Eklutna Lake on its own initiative or at the request of any of the resource agencies or NVE. Fish passage measures must meet certain criteria (see Section 4.2 of the Proposed Final Fish and Wildlife Program).
36	NVE	Page 44	3.0 Draft Fish and Wildlife Program	As such, we reject the AWWU Portal alternative because it: 1. Fails to remedy the harms to sockeye salmon and their spawning habitat that instigated the Agreement and Program process; 2. Leaves one mile of dry riverbed that prevents fish from reaching Eklutna Lake; 3. Blocks access to the majority of sockeye, Chinook, and coho salmon spawning and rearing habitat in the lake and its tributaries; 4. Delivers inadequate flows for fish below the Eklutna Lake dam; 5. Ignores the requests of the Eklutna Dena’ina for the recovery of a natural river after 94 years of harm; 6. Ignores the science-based recommendations of the two federal agencies (USFWS and NMFS) that are responsible for protecting salmon and other affected fish and wildlife resources; 7. Could jeopardize the Anchorage drinking water system; and, 8. Burdens ratepayers and taxpayers with $57 million in unnecessary cost increases.	The Proposed Final Fish and Wildlife Program will not jeopardize the Anchorage drinking water system. The design of the Eklutna River Release Facility will not restrict AWWU's ability to withdraw water, nor will operation of the river release valve cause harmful pressure fluctuations within the system. The project will utilize the excess capacity within AWWU's tunnel to deliver water to the river. Of the 12 preferred alternatives presented by the Project Owners and other stakesholders during the alternatives analysis process, the Proposed Final Fish and Wildlife Program is the least costly alternative, along with the similar ADNR alternative at the same annualized cost, thus the least burdensome to ratepayers and taxpayers.

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37	NVE	Page 44	3.0 Draft Fish and Wildlife Program	The Eklutna River has been degraded by hydropower for 94 years. It is not worth rushing into an expensive and ineffective solution when we can properly fix the problem within the next decade. NVE's alternative calls for a phased solution instead of a commitment to an additional 35-year term of devastation. Rather than commit ratepayers and taxpayers to a $57 million expense for the AWWU Portal, we suggest saving that money and waiting a few more years to do the job right at little to no cost to ratepayers and taxpayers.	The Project Owners have engaged in a 5-year process of studies and evaluation of alternatives in consultation with the Parties to the 1991 Agreement, NVE, Eklutna Inc., and other stakeholders. The Project Owners are contractually and legally bound by the terms of the 1991 Agreement, including the schedule, which calls for submission of the Proposed Final Fish and Wildlife Agreement to the Governor in April 2024.
38	Eklutna, Inc.	Page 45	3.1 Impacts to Fish and Wildlife	We urge a more thorough examination of the economic impact on Eklutna, Inc. due to the devaluation of landholding and the consequential impact on fisheries. Eklutna, Inc. owns nearly all the land on each side of the Eklutna River (River). Further, the State of Alaska's Public Access Assertion and defense unit has deemed Eklutna, Inc. to own the Ekutna Riverbed. There should be consideration of the legal ramifications of Eklutna, Inc.'s ownership of the riverbed and how access along the River will be managed. There is a need for a more comprehensive assessment of riparian rights for landholdings with a consideration of the effective regulatory taking of the Eklutna, Inc. land, suppression of economic opportunities on these lands, and the destruction of public and subsistence resources.	The 1991 Agreement does not require the Project Owners to examine the economic impacts due to the devaluation of landholdings affected by the development and operation of the Project. No party requested that we conduct such studies at the early stages of the study process when the NVE and Eklutna, Inc., among other entities, were invited to work collaboratively to develop study plans.
39	USFWS Enclosure	Page 45	3.1 Impacts to Fish and Wildlife	One of the main ecological functions of a river in a watershed is to transport water, sediments, and nutrients to and from freshwater and marine environments. Eklutna Lake and other headwater features in the watershed are a critical source of these nutrients. Recognizing the importance of this component of the watershed, the Service recommends the Fish and Wildlife Program include methods to reconnect Eklutna Lake to the Eklutna River at the dam.	The Proposed Final Fish and Wildlife Program includes a limited fish passage reopener (Section 4.2). With this limited reopener, the Project Owners recognize that reconnecting Eklutna Lake and Eklutna River for fish passage may become feasible in the future and fish passage is important to NVE, the federal and state agencies, and others who have commented on the Draft Program. If a new, proven methodology or technology becomes available, then the Committee may reevaluate the potential for the construction and operation of fish passage facilities both into and out of Eklutna Lake on its own initiative or at the request of any of the resource agencies or NVE. Fish passage measures must meet certain criteria (see Section 4.2 of the Proposed Final Fish and Wildlife Program).
40	USFWS Enclosure	Page 45	3.1 Impacts to Fish and Wildlife	The Service shares the Native Village of Eklutna's (NVE) desire to return salmon to the Eklutna River, which NVE has stated in Resolution 2022-043. The original Eklutna hydropower project in 1929, 94 years ago, marks the beginning of watershed function decline. Since that time, impacts to the riverine and wetland ecology have continued to mount; notable among these is the 1955 and 1964 establishment of the present-day dam at the outlet of the historical glacial moraine lake, namesake of the Eklutna people, which all but cut off stream flows downstream of the hydropower dam.	The 1929 hydroelectric project is a separate project from the existing Eklutna Hydroelectric Project with separate impacts. The 1991 Agreement addresses impacts to fish and wildlife from the existing Eklutna Hydroelectric Project.

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41	USFWS Enclosure	Page 45	3.1 Impacts to Fish and Wildlife	The historical impacts associated with the complete dewatering of an anadromous stream of ecological and cultural significance have not been adequately quantified through the 1991 Agreement process. According to the 1991 Agreement, Project Owners are required to fund and conduct studies to examine and, if possible, quantify impacts to fish and wildlife as a result of the Project. The Draft Program (p. 45) does qualitatively describe impacts associated with river impoundment, stating the existing hydroelectric project "diverted all outflows from Eklutna Lake, [and that] reduced flows to the Eklutna River led to loss of winter rearing habitat, poor sediment transport, excessive siltation of stream channels, gravel starved stream channels, reduced water quality, and insufficient water depth for Chinook salmon spawning." Adding, "in addition to impacting fish habitat, the Project also impacted wetlands downstream of Eklutna Dam, both riparian wetlands that existed in the upper river and estuarine wetlands below the railroad bridge." The Draft Program (p. 45) summarizes, "[i]mpacts to salmon and wetlands likely had an indirect impact on the wildlife that depend on the salmon and utilize those wetlands".	In compliance with the 1991 Agreement, the Project Owners funded and conducted a 2-year study program that was developed in consultation with and concurred with by the Parties to the 1991 Agreement and NVE and other stakeholders. The study program was thorough and adequate.
42	USFWS Enclosure	Page 45	3.1 Impacts to Fish and Wildlife	While the Draft acknowledges historical conditions and loss of ecosystem functions, it stops short of attempting to quantify the change between pre-development and existing conditions, stating that "the original impact of the Project on fish and wildlife resources is difficult to quantify since no fish or wildlife studies were conducted pre-construction (p. 45)." This statement discounts multiple lines of inquiry which could have been followed to estimate actual system wide impacts associated with dam river impoundment and hydropower operation. Using models developed for this project could provide another means of comparing relative habitat losses with potential habitat gains. While the models developed for estimating habitat gains under different alternatives are only calibrated to 375 cubic feet per second (cfs), it would be informative to see what they would predict for spawning and rearing habitat at the historic flow levels to estimate loss.	The question of how much habitat would be gained if modeling was extended beyond the 375 cfs flow can be largely answered without the need for doing so. In the case of spawning habitat, only one of the 30 1D transects displayed habitat gains beyond the 375 cfs flow with all others showing defined peaks within the 375 cfs modeled range. This would suggest that modeling beyond 375 cfs would actually show a decrease in spawning habitats over the segment of the Eklutna River above Thunderbird Creek. Similarly for spawning, although not to the same degree, the majority (26) of the 1D juvenile transects showed defined peaks, in some cases multiple peaks, within the 375 cfs modeled range, which would again suggest that an overall decrease in juvenile habitat may occur in the Ekutna River at flows greater than 375 cfs.
43	USFWS Enclosure	Page 45	3.1 Impacts to Fish and Wildlife	Section 3.1 of the Draft Program does not quantify impacts to fish and wildlife. Therefore, as the majority of the watershed has been affected by the ecological repercussions of removing water, we recommend the final Program include impacts to consider the watershed effects. Avenues to explore quantification of impacts include: 1) employing higher test flow releases to calibrate instream flow and habitat models to flow levels commensurate with historical, formative flows; 2) giving due credit and scientific credence to Indigenous Knowledge provided by Native Village of Eklutna knowledge bearers regarding the historical state of the fishery and watershed; 3) empirical inferences of pre-dam hydrology and habitat conditions based on cross section morphology; and 4) an analog comparison of similar river systems through either reference stream case studies or literature review.	The Proposed Final Fish and Wildlife Program presents a program to protect, mitigate damages to, and enhance fish and wildlife impacted by the development of the Eklutna Hydroelectric Project. 1) The study flow release was conducted in September 2021; no additional study flow releases will be done. 2) A detailed description of the historical environment, including the traditional ecological knowledge (TEK) provided by NVE, was provided in the Initial Information Package (available on the project website: eklutnahydro.com) and Section 4.11.9 of the Supporting Information Document.

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44	USFWS Enclosure	Page 45	3.1 Impacts to Fish and Wildlife	The Eklutna River is approximately 12 river miles long from dam to discharge into Knik Arm with a historic average width of 100 feet. That amounts to 145.5 acres of direct impacts in addition to other watershed impacts (wetlands, off-channel habitat, lake habitat, upper tributaries, and coastal habitat) that should be considered, as well as impacts on fish and wildlife using surrounding riverine and upland habitat.	Thank you for your comment. Impacts to fish and wildlife habitat from the existing project have been taken into consideration throughout this process.
45	USFWS Enclosure	Page 45	3.1 Impacts to Fish and Wildlife	Using the watershed approach sets a boundary to quantify potential direct, indirect, and cumulative impacts on fish and wildlife based on habitat. The Eklutna watershed is 174 square miles (111,360 acres) of which Eklutna Lake is 119 square miles (76,160 acres), the Eklutna River drainage is 17 square miles (10,880 acres), and the remaining area is in the Thunderbird Falls sub-watershed (USACE 2004, p.9). Therefore, the Draft Program should consider the 10,880 acres of habitat impacted in the Eklutna River drainage and should also include acres of habitat impacted by fluctuations in Eklutna Lake, areas of upstream tributaries, downstream river, wetlands, and coastal habitats in the watershed. Functional loss should include temporal loss and modifications of habitat.	Study objectives, study area, and study methods used are described in each of the 12 resource study reports that made up the 2-year study program. The 2-year study program was developed in consultation with and concurred with by the Parties to the 1991 Agreement and NVE and other stakeholders.
46	USFWS Enclosure	Page 45	3.1 Impacts to Fish and Wildlife	All of these watershed impacts should be quantified in the in the Fish and Wildlife Program. Quantifying these impacts gives context to the PME measures proposed.	Impacts were quantified to the extent possible in the study reports.
47	NVE	Page 45	3.1 Impacts to Fish and Wildlife	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. Again, such evaluation would be required in any FERC relicensing under Endangered Species Act ("ESA") section 7. Given the 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.	Beluga whale observations were reported in the Terrestrial Wildlife Study Report and increased flow releases and salmon abundance was noted as a benefit to marine mammals, including beluga whale, in the July 2023 Alternatives Analysis meeting dicussion on potential wildlife impacts of flow release scenarios.

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48	NVE	Page 45	3.1 Impacts to Fish and Wildlife	The AWWU Portal puts the least amount of water in the river of all the alternatives for regular flows and high-flow events. The justification for choosing the lowest flow alternative primarily comes from economic considerations rather than what is best for fish and wildlife. The Agreement makes clear that the consideration of non-fish and wildlife factors should be made by the Governor, not by the Project Owners in the Draft Program. The preferred alternative continues to create a dead-end river, with over a mile of dry streambed below the dam. Creating a dead-end river hardly mitigates the damages caused to fish and wildlife from the Project because it prevents connectivity between Knik Arm, the lower Eklutna River, the lake, and the upper tributaries. The preferred alternative cannot mitigate damages to sockeye in any way because it will continue to prevent nearly all anadromous sockeye from spawning in the Eklutna River system. Because the destruction of the sockeye run was the "specific concern" leading to the Agreement, a Program that continues to prevent almost all sockeye from spawning is impermissible. The preferred alternative permits less than 10% of the river to flow down its historic channel to the Knik Arm, the smallest amount of any proposed alternative.	Thank you for your comment.
49	NVE	Page 45	3.1 Impacts to Fish and Wildlife	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 scope of analysis covered in the study program was agreed to by all of the Parties to the 1991 Agreement, NVE and other stakeholders. The Owners conducted the agreed to study methods and relied on that information in the alternatives analysis and ultimately in the Proposed Final Program.
50	NVE	Page 45	3.1 Impacts to Fish and Wildlife	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.80 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.	Study objectives, study area, and study methods used are described in each of the 12 resource study reports that made up the 2-year study program. The 2-year study program was developed in consultation with and the Parties to the 1991 Agreement and NVE and other stakeholders.

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51	NVE	Page 45	3.1 Impacts to Fish and Wildlife	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. 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. 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 introduce biases into inferences." 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. 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. 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.	Study objectives, study area, and study methods used are described in each of the 12 resource study reports that made up the 2-year study program. The 2-year study program was developed in consultation with and the Parties to the 1991 Agreement and NVE and other stakeholders.

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52	NVE	Page 45	3.1 Impacts to Fish and Wildlife	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. 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. 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." 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.	Comment noted.

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53	NVE	Page 45	3.1 Impacts to Fish and Wildlife	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. 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, and coho) as essential to the beluga's conservation (also known as Primary Constituent Elements). NMFS 2016 Recovery Plan for Cook Inlet belugas identifies prey availability as a threat of medium concern for their recovery. 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." 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." 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. 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.	The Project Owners agree that increased salmon runs anticipated to result from the increase in fish habitat under the Proposed Final Fish and Wildlife Program should benefit Cook Inlet beluga whales.

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54	NVE	Page 45	3.1 Impacts to Fish and Wildlife	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. 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." 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." 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. 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. Another recent 2023 study by Warlick et al. stated that "aerial survey data suggest that the [Cook Inlet beluga] population continues to decline[, and the] leading hypotheses include reduced prey availability […]."	Comment noted. See also response to Comment # 53.
55	NVE	Page 45	3.1 Impacts to Fish and Wildlife	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. 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 Proposed Final Fish and Wildlife Program includes a limited fish passage reopener (Section 4.2). With this limited reopener, the Project Owners recognize that fish passage may become feasible in the future and fish passage is important to NVE, the federal and state agencies, and others who have commented on the Draft Program. If a new, proven methodology or technology becomes available, then the Committee may reevaluate the potential for the construction and operation of fish passage facilities both into and out of Eklutna Lake on its own initiative or at the request of any of the resource agencies or NVE. Fish passage measures must meet certain criteria (see Section 4.2 of the Proposed Final Fish and Wildlife Program).
56	NVE	Page 45	3.1 Impacts to Fish and Wildlife	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.	The scope of analysis covered in the study program was agreed to by all of the Parties to the 1991 Agreement, NVE and other stakeholders. The Owners conducted the agreed to study methods and relied on that information in the alternatives analysis and ultimately in the Proposed Final Program.
57	USFWS Enclosure	Page 46	Section 3.2 PME Measures for Fish and Wildlife	The proposed Program does not mitigate for all impacts of the Project. Performance of a wetland functional assessment was previously planned to quantify impacts, as agreed upon by the TWG. However, according to the Wetlands and Wildlife Study Results (p.38, ABR June 2023), because no permits were needed, functional loss was based on best judgement of the Project Owner's consultant instead, and no mitigation for loss of wetlands was proposed.	The Project Owners maintain that the Program significantly mitigates the Project's impacts to fish and wildlife. The 1991 Agreement does not require the Project Owners to mitigate all impacts of the Project. The Wetlands and Wildlife studies were conducted in accordance with the final study plans. USFWS concurred with the scope of work in the final study plans on April 29, 2022.

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58	USFWS Enclosure	Page 46	Section 3.2 PME Measures for Fish and Wildlife	The Service recommends a broader scale of PME measures be developed to mitigate the full range of impacts from the Project. The Service provided our preferred alternative on July 3, 2023. In summary, our recommendation included the replacement dam and our preferred flow regimes: year-round instream flows of 160 cfs June through October and 75 cfs January to May, with an adaptive management strategy that allows for adjusting the flow regime based on new information and monitoring results; and channel maintenance flows of 800 cfs once, then 700 cfs every 3 years.	The Project Owners considered and evaluated all 12 preferred alternatives submitted as part of the Alternatives Analysis process. The evaluation included a cost effectiveness analysis, impacts to ratepayers and taxpayers, and resource impacts (see presentation from July 2023 alternatives analysis meeting). The Project Owners believe the PME measures in the Proposed Final Fish and Wildlife Program meet the requirements of the 1991 Agreement.
59	USFWS Enclosure	Page 46	Section 3.2 PME Measures for Fish and Wildlife	Additionally, as described in our recommendation letter, dated July 3, 2023, the Service recommends AWWU bridge construction, partial lakeside trail improvements, and physical habitat improvements. We are open to a phased implementation approach whereby more water is returned to the Eklutna River as soon as possible while time is provided in the Fish and Wildlife Program for planning a new dam. If a new dam is not possible, then the next best alternative would be the existing dam with new infrastructure for fish passage.	The Proposed Final Fish and Wildlife Program includes AWWU bridge construction, funding for lakeside trail improvements, and funding for physical habitat improvements (Sections 2.4, 2.5.1, and 3.3.6). The Proposed Final Fish and Wildlife Program also includes a limited fish passage reopener (Section 4.2).
60	USFWS Enclosure	Page 46	Section 3.2 PME Measures for Fish and Wildlife	The Fish and Wildlife Program should incorporate habitat improvements, including repair and maintenance of the perched culverts and other fish passage structures such as those along the AWWU access road. The Program should include enhancement and protection of spawning a rearing habitat in Eklutna Lake and tributaries, and Eklutna River habitat.	Repairs and maintenance of the AWWU access road is not the responsibility of the Project Owners.
61	Eklutna, Inc.	Page 47	Section 3.2.1.1 Eklutna River Release Facility	Further, the North Anchorage Land Agreement mandates that Eklutna, Inc. must consent to most forms of development on its land within the Chugach State Park. Our review of the Program did not indicate whether the lands utilized for the Portal option are Eklutna, Inc. lands. Please provide in the Program a description of all lands proposed for use on the Portal option.	The AWWU Portal Valve is located on BLM land. It's likely that the bridge crossings are on Eklutna Inc. land, but within AWWU's easement. Land ownership and management is discussed in Section 2.1.10 of the Supporting Information Document.
62	ADNR	Page 47	Section 3.2.1.1 Eklutna River Release Facility	The Project Owner's Draft Program would create an Eklutna River Release facility adjacent to the existing AWWU portal valve approximately one mile downstream from the dam. As the concept is described in the draft program, the infrastructure modification may not require a Certificate of Approval from the Alaska Dam Safety Program. It would utilize existing outlet works from the reservoir to the AWWU facility downstream. Additional development of the option would be required to make a definitive determination.	Comment noted.

No.	Entity	Page	Section, Table, or Figure	Comment	Response
63	NMFS	Page 47	Section 3.2.1.1 Eklutna River Release Facility	The proposed actions within the draft Program do not align with our management interests to re-water the full length of the Eklutna River as outlined in our September 11, 2023, recommendations. This leaves extensive project related impacts unaddressed. To meet the intent of the 1991 Agreement for mitigating project related impacts, to enhance fish, wildlife, and habitat affected by the Project, and to function at least as well as would have been the case under FERC licensing, the entire river should be re-watered on a year-round basis. Adding water to the full extent of the river is possible with a new spillway gate (discussed below) and would provide broader, holistic ecological benefits that will, in turn, benefit species like Pacific salmon and their prey species. Further, minimum flows in the entire reach of the river affected by Project operations are a common FERC license requirement. Adopting this recommendation to re-water the full length of the Eklutna River would promote the stated 1991 Agreement intent to function at least as well as Federal regulation. We understand the limitations of the existing Project design to meet this stated goal. However, in our view appropriate Project modifications and an adaptive management plan can better balance water availability for fish habitat and hydropower generation. A new spillway gate could be the first step.	The Project Owners recognize that a fixed wheel gate might be warranted in the future to better manage future spill events if climate change causes inflows to the resevoir to increase significantly and to provide for a higher magnitude channel maintenance flow (if needed). Therefore, in the Proposed Final Fish and Wildlife Program, the Project Owners have committed to conducting a more detailed feasiblity study of the fixed wheel gate within three years of the Governor's issuance of the Final Fish and Wildilfe Program. If found feasible and cost effective, on the 10th anniversay after initiating instream flows, the Project Owners will confer with the Committee to reevaluate the need for a fixed wheel gate based on information gathered from monitoring during that 10-year period.
64	NMFS	Page 49	Section 3.2.1.2 Flow Regime	The seasonal minimum flows outlined in the draft Program do not address the scale of direct Project related impacts and appear to be limited to the capability of the existing infrastructure. In order to account for and address the full scope of Project impacts, the mitigation measures need to re-establish a broader range of habitat availability within the Eklutna River. To do this, moderate increases in winter flow to 40 -70 cfs is a better option. We acknowledge the limitations of the existing infrastructure to provide winter flows and maintain hydropower operations; however, we see the potential for mitigation measures that balance these interests. Similarly, the draft Program's proposed summer flows of 40 cfs are described as flows that will increase habitat for coho and Chinook; however, our recommended summer flow of 160 cfs provides greater habitat availability to address project related impacts. The range of flows discussed in the first alternatives meeting included 80-90 cfs for maximum coho spawning habitat and 150-160 cfs for maximum Chinook habitat. Here, too, we see opportunity for better mitigation of Project related impacts while balancing hydropower generation. In addition, each of the resource agencies who are signatories to the 1991 Agreement recommended seasonal flows greater than seasonal flows identified in the draft Program. We recommend re-evaluating the seasonal flows in the context of our resource management interests and the data from the alternatives analysis process.	The Proposed Final Fish and Wildlife Program includes the same default year-round instream flow regime as in the Draft Fish and Wildlife Program. However, it should be noted the Monitoring and Adaptive Management Committee may modify the default year-round instream flow regime based on monitoring as long as as (1) the requested flows do not exceed the operational limitations of the Project infrastructure and (2) the ramping rates conform to fisheries ramping rate requirements (see Section 3.3.5 of the Proposed Final Fish and Wildlife Program). Additionally, because climate change may cause increased inflow to Eklutna Lake, 10 years after instream flows are established, the Project Owners will compare the average annual inflows to Eklutna Lake for the last 10 years to the previous 10-year period. Any increase in average annual inflows will be split 50/50 between hydropower and the annual water budget for instream flows. If there is a decrease in average annual inflows, the annual water budget for instream flows will not be decreased. The Project Owners will repeat this process every 10 years.

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65	USFWS Enclosure	Page 49	Section 3.2.1.2 Flow Regime	While introducing some flow is an improvement over no flows, we disagree that introducing baseline levels for 11 out of the 12 miles of river with no connectivity to the lake restores habitat to productive levels or that the proposed flow regime would achieve a significant amount of the potentially available habitat, and the Service has provided previous comments on this subject.	Thank you for your comment.
66	USFWS Enclosure	Page 49	Section 3.2.1.2 Flow Regime	Habitat loss associated with dam development is not enumerated. Instead, existing conditions were set as the baseline for assessing potential PME measures for instream flow, geomorphology, sediment transport, and habitat models. These analyses were all based on test releases of up to 150 cfs, one tenth of historical bankfull flows (1,527-1,682 cfs in the pre-development historical channel; Hanson 2019, p. 6 and Appendix B). This flow level allowed for extrapolation of modeling up to 375 cfs (Kleinschmidt 2023b, pp. 18-19), which only evaluates habitat within the historical low flow channel. At this intermediate flow, the water never reaches the tops of the stream banks or accesses the floodplain. As we have stated previously (Service 2022, p. 3), this produces flawed estimates of rearing habitat gains and losses at different flow levels.	We previously responsed that the HEC-RAS model is useful as a "snapshot in time" model of the current condition of the channel to help inform analysis of potential new flow regimes. And as we have discussed throughout the study process that the channel will change in the future as it adjusts to any new flow regime. The term "floodplain" refers to the extent of innundation under peak flows in general, not the extent of test flows. The Monitoring and Adaptive Management Committee will execute a Monitoring and Adapative Management Plan, which may include a monitoring component to inform understanding of these future channel changes and an adaptive management component.
67	USFWS Enclosure	Page 49	Section 3.2.1.2 Flow Regime	The Service continues to recommend an instream flow regime that targets 160 cfs during the salmon spawning and migration window, and 75 cfs throughout the winter and shoulder seasons. These are the modeled flow levels which produce stream depths suitable for Salmon spawning and rearing, respectively (Moyle 2002, OSGC 1963, Thompson 1972, and DeVries 1997). Service recommended flow levels consider the literature as well as empirical Eklutna River reference stream channel measurements reported on in Hanson 2019.	Thank you for your recommendation.
68	USFWS Enclosure	Page 49	Section 3.2.1.2 Flow Regime	Reestablish Eklutna River hydrology through year-round instream flows that achieve longitudinal and lateral connectivity, fish passage through barriers, water quality standards, and suitable winter instream conditions to support functioning, resilient, and sustainable salmon habitat.	The new Eklutna River Release Facility will provide year-round instream flows to approximately 11 out of 12 miles of the Eklutna River. The default summer flow releases (40 cfs) when combined with natural accretion in the Eklutna River should (1) significantly increase the available spawning habitat for Chinook, coho, pink, and chum salmon, (2) provide sufficient flows for migrating adult salmon to navigate the potential upstream passage barriers identified in the confined canyon reach, and 3) provide additional rearing habitat for salmon.
69	USFWS Enclosure	Page 49	Section 3.2.1.2 Flow Regime	Implement measures to enhance spawning and rearing habitat based on functional deficits.	The new Eklutna River Release Facility will provide year-round instream flows to approximately 11 out of 12 miles of the Eklutna River. The default summer flow releases (40 cfs) when combined with natural accretion in the Eklutna River should (1) significantly increase the available spawning habitat for Chinook, coho, pink, and chum salmon, (2) provide sufficient flows for migrating adult salmon to navigate the potential upstream passage barriers identified in the confined canyon reach, and 3) provide additional rearing habitat for salmon.

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70	ADFG	Page 52	Figure 3-3. Spawning Habitat Curves for the Eklutna River below the AWWU Portal Valve.	Add a figure showing the Rearing Habitat Curves below the AWWU Portal similar to Figure 3-3 (which presents the Spawning Habitat Curves). Benefits to rearing from increased flows should be discussed/detailed similar to benefits for spawning.	The Project Owners have coordinated with ADFG regarding benefits to rearing habitat which has been addressed in the Proposed Final Fish and Wildlife Program.
71	ADNR	Page 54	Section 3.2.2.1 Channel Maintenance Flows Infrastructure	This proposed alternative would require revisions to the operations and maintenance management of the Eklutna Lake Dam and appurtenant works which would require approval from the ADNR to maintain compliance with the state dam safety regulations. These proposed changes would require the installation of additional monitoring instruments and equipment automation. Depending on the scope and location of these modifications, an application for Certificate of Approval to Modify a Dam may be required.	Comment noted.
72	NMFS	Page 54	Section 3.2.2.1 Channel Maintenance Flows Infrastructure	The draft Program did not adopt our recommendation for a new spillway gate at the existing dam. The analysis provided indicates that continual flows from the dam would greatly diminish hydropower generation by requiring the pond to be held at a higher level. Thus, the draft Program proposed a new gaging system to improve estimates of flow releases. This proposed measure does not increase the range of flows or address future flow conditions. Further, this proposed measure does not fulfill the intent of the 1991 Agreement, which states that the Owners shall prepare a draft Program for “the protection, mitigation of damages to, and enhancement of fish and wildlife (including related spawning grounds and habitat).”	The Project Owners recognize that a fixed wheel gate might be warranted in the future to better manage future spill events if climate change causes inflows to the resevoir to increase significantly and to provide for a higher magnitude channel maintenance flow (if needed). Therefore, in the Proposed Final Fish and Wildlife Program, the Project Owners have committed to conducting a more detailed feasiblity study of the fixed wheel gate within three years of the Governor's issuance of the Final Fish and Wildilfe Program. If found feasible and cost effective, on the 10th anniversay after initiating instream flows, the Project Owners will confer with the Committee to reevaluate the need for a fixed wheel gate based on information gathered from monitoring durth that 10-year period.
73	NMFS	Page 54	Section 3.2.2.1 Channel Maintenance Flows Infrastructure	The Owners could have considered impacts on electric ratepayers and municipal water utilities in the Study Plans, and the Governor may consider efficient and economical power production during his review, but the draft Program’s mandate is solely to propose measures to protect and enhance fish and wildlife and to mitigate damages to such from the Project. By not including a new spillway gate in the draft Program, the potential for implementing a variety of flows to the Eklutna River is limited.	The Project Owners recognize that a fixed wheel gate might be warranted in the future to better manage future spill events if climate change causes inflows to the resevoir to increase significantly and to provide for a higher magnitude channel maintenance flow (if needed). Therefore, in the Proposed Final Fish and Wildlife Program, the Project Owners have committed to conducting a more detailed feasiblity study of the fixed wheel gate within three years of the Governor's issuance of the Final Fish and Wildilfe Program. If found feasible and cost effective, on the 10th anniversay after initiating instream flows, the Project Owners will confer with the Committee to reevaluate the need for a fixed wheel gate based on information gathered from monitoring durth that 10-year period.

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74	NMFS	Page 54	Section 3.2.2.1 Channel Maintenance Flows Infrastructure	Further, not including a new spillway gate in the draft Program does not take into account the pervasive changes to inflows to Eklutna Lake, to fisheries, or habitat driven by climate change. The Fifth National Climate Assessment for Alaska includes two key messages that resonate with the 1991 Agreement process and development of mitigation measures. First, our built environment will become more costly. Much of Alaska's infrastructure was built for a stable climate, and changes in permafrost, ocean conditions, sea ice, air temperature, and precipitation patterns place that infrastructure at risk. The assessment indicates with high confidence that further warming is expected to lead to greater needs and costs for maintenance or replacement of infrastructure. Planning for further change and greater attention to climate trends and changes in extremes can help improve infrastructure resilience around Alaska. In addition, there is high confidence that Alaska's ecosystems are changing rapidly due to climate change. Many of the ecosystem goods and services that Alaskans rely on are expected to be diminished by further change. Careful management of Alaska's natural resources to avoid additional stresses on fish, wildlife, and habitats can help avoid compounding effects on our ecosystems. This climate assessment for Alaska, which includes modeled and observed climate related trends, demonstrates negative implications for the Eklutna Hydropower Project operations related to water control. Warming trends and increased precipitation will influence the impoundment level throughout the year, potentially leveling the flow duration curve, and will likely increase the potential for uncontrolled spill at the existing dam. Our recommendation for a new spillway gate will increase the resilience of the project to climate change effects, likely mitigating the potential for long-term maintenance and repairs, as well as improving the ability to implement cost effective mitigation measures or natural resources. Incorporating a new spillway gate at the existing dam, as discussed throughout the alternatives assessment process, would expand the range of flows released to the Eklutna River to	The Project Owners recognize that a fixed wheel gate might be warranted in the future to better manage future spill events if climate change causes inflows to the resevoir to increase significantly and to provide for a higher magnitude channel maintenance flow (if needed). Therefore, in the Proposed Final Fish and Wildlife Program, the Project Owners have committed to conducting a more detailed feasiblity study of the fixed wheel gate within three years of the Governor's issuance of the Final Fish and Wildilfe Program. If found feasible and cost effective, on the 10th anniversay after initiating instream flows, the Project Owners will confer with the Committee to reevaluate the need for a fixed wheel gate based on information gathered from monitoring durth that 10-year period.
75	USFWS	Page 54	Section 3.2.2.1 Channel Maintenance Flows Infrastructure	Include methods to facilitate larger channel maintenance flows from the lake, such as a new gate at the dam.	The Project Owners recognize that a fixed wheel gate might be warranted in the future to better manage future spill events if climate change causes inflows to the resevoir to increase significantly and to provide for a higher magnitude channel maintenance flow (if needed). Therefore, in the Proposed Final Fish and Wildlife Program, the Project Owners have committed to conducting a more detailed feasiblity study of the fixed wheel gate within three years of the Governor's issuance of the Final Fish and Wildilfe Program. If found feasible and cost effective, on the 10th anniversay after initiating instream flows, the Project Owners will confer with the Committee to reevaluate the need for a fixed wheel gate based on information gathered from monitoring durth that 10-year period.

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76	NMFS	Page 54	Section 3.2.2.2 Channel Maintenance Flow Regime	The draft Program does not provide sufficient channel maintenance flows (also referred to as “flushing flows”) to address our resource management interests of reviving the riverine habitat after decades of no inflow and to ensure long-term in-stream habitat complexity. Similar to minimum flow for bypass reaches, flushing flows are consistent with Federal licensing requirements6. Although we agree with the timeframe for flushing flows, the proposed 220 cfs and associated water budget are inadequate to meet our resource management interests for migratory fish and their habitat. The proposed flows are unlikely to modify substrates and support habitat complexity in a meaningful way after nearly a century of limited impactful flow events. Our proposal for flushing flows of 700 cfs will result in significant, meaningful habitat modifications, consistent with natural hydrographs in unmodified rivers, and will mitigate impacts to the Eklutna River from hydropower development. These larger flushing flows need greater consideration for their functionality to mitigate project related impacts and meet the intent of the 1991 Agreement.	The default channel maintenance flow (Table 2-2 and Figure 2-2, Proposed Final Fish and Wildlife Program) was developed based on field studies, modeling, and peak flow statistics in similar unmanaged Alaskan rivers and is shaped to resemble a natural peak flow hydrograph. Per the water budget (Section 3.3.1, Proposed Final Fish and Wildife Program), 2,913 acre-feet of water is available for release into the Eklutna River at the beginning of each 10-year period for channel maintenance flows. Based on the results of the monitoring program, the Committee may request modifications to the magnitude, duration, frequency, or shape of the scheduled channel maintenance flow releases, as long as (1) the requested flows do not exceed the operational limitations of the Project infrastructure and (2) the ramping rates conform to fisheries ramping rate requirements. Furthermore, The Project Owners recognize that a fixed wheel gate might be warranted in the future to better manage future spill events if climate change causes inflows to the resevoir to increase significantly and to provide for a higher magnitude channel maintenance flow (if needed). Therefore, in the Proposed Final Fish and Wildlife Program, the Project Owners have committed to conducting a more detailed feasiblity study of the fixed wheel gate within three years of the Governor's issuance of the Final Fish and Wildilfe Program. If found feasible and cost effective, on the 10th anniversay after initiating instream flows, the Project Owners will confer with the Committee to reevaluate the need for a fixed wheel gate based on information gathered from monitoring during that 10-year period.
77	USFWS Enclosure	Page 54	Section 3.2.2.2 Channel Maintenance Flow Regime	The Draft Program (pp. 55-56) proposes channel maintenance flows with a duration of 72 hours in 3 out every 10 years. Flows would start at 40 cfs, be at a maximum of 220 cfs for 36 hours, and slowly decrease to mimic a more natural hydrograph. Channel maintenance flows are proposed to occur in fall (when lake levels are highest) as spill events from the existing maintenance gate at the dam in combination with flow releases at the Eklutna River Release Facility downstream. According to the Draft Program, if there is not enough water to spill over, then the proposal is to raise reservoir surface height to achieve the desired flow rate. According to the Terrestrial Wildlife Study Report (p. 66) there have only been nine high-flow events between the 1965 and 2019, when water overtopped the Eklutna Lake Dam spillway, during this period flows ranged from 85 cfs to 1,022 cfs (ABR 2023a). This proposal does not provide adequate flows to restore natural watershed hydrologic dynamics. The Service recommends an initial release of 800 cfs to reorganize the downstream channel and route as much aggraded sediment as possible, followed by triannual peak flows of 700 cfs. Routine peak flows target a water quantity that is seven times the mean annual flow, mimicking the rainfall peak in similar Alaskan rivers (Cathy Dube, personal communication).	The default channel maintenance flows (Table 2-2 and Figure 2-2, Proposed Final Fish and Wildlife Program) were developed based on field studies, modeling, and peak flow statistics in similar unmanaged Alaskan rivers and is shaped to resemble a natural peak flow hydrograph. The default channel maintenance flow (peaking at 220 cfs for 36 hours) should complement the base flow regime and help create and maintain channel dimensions and substrate characteristics to support physical fish habitat over the long term. The default downramping schedule Figiure 2-2, Proposed Final Fish and Wildlife Program) reflects a downramping rate of less than 1 to 2 inches per hour to reduce the risk of any fish stranding downstream when transitioning back to base flows.

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78	USFWS Enclosure	Page 54	Section 3.2.2.2 Channel Maintenance Flow Regime	The Draft proposes a maintenance flow regime that fails to meet the standards of the Agreement studies themselves. A channel maintenance flow regime of a 220 cfs flow in 3 out of every 10 years is inadequate, and less than the lowest peak flow considered in the Geomorphology and Sediment Transport Study (lowest was 300 cfs; Watershed GeoDynamics 2023, pp. 109-110). The study highlights channel maintenance flows of 300 to 500 cfs for encouraging substrate particle sorting within the range of preferred spawning gravels for the target species coho salmon (O. kisutch) and Chinook salmon (O. tshawytscha; Watershed GeoDynamics 2023, p. 115).	The purpose of the geomorphology and sediment transport study was to develop a functioning model that could be used during the subsequent alternatives analysis. The study report showed a preliminary range of flows that may be adequate depending on the base flow regime. On May 17, 2023, during the second Alternatives Analysis meeting, the Project Owners presented new sediment transport modeling results including the proposed base flow regime and corresponding channel maintenance flow (220 cfs in three out of every 10 years). These results show that the 220 cfs channel maintenance flow is appropriate when paired with the proposed base flow regime.
79	USFWS Enclosure	Page 54	Section 3.2.2.2 Channel Maintenance Flow Regime	The notion that fractional maintenance flows are capable of maintaining instream habitats created under significantly higher flow conditions conflicts with our understanding of basic stream processes. A flaw in instream flow, habitat, and sediment transport analyses is that the studies assume the size and shape of the downstream channel will remain consistent with existing conditions. All flow levels less than historical conditions will be incapable of maintaining existing channel conditions in their reference (pre-impoundment) state. Every proposed flow level will therefore require modification of channel and floodplain to create self-sustaining habitat conditions within the river channel and adjacent side channel, wetland, and riparian habitats.	As discussed throughout the study process, the channel will change in the future as it adjusts to any new flow regime. The Monitoring and Adaptive Management Committee will execute a Monitoring and Adapative Management Plan, which may include a monitoring component to inform understanding of these future channel changes and an adaptive management component.
80	USFWS	Page 54	Section 3.2.2.2 Channel Maintenance Flow Regime	It is important to also note that the infrastructure modifications proposed in this Draft cannot accommodate the higher channel maintenance flows needed. All previously analyzed alternatives included a fixed-wheel gate which provided flexibility for controlled flow releases originating entirely at the lake.	The default channel maintenance flow (Table 2-2 and Figure 2-2, Proposed Final Fish and Wildlife Program) was developed based on field studies, modeling, and peak flow statistics in similar unmanaged Alaskan rivers and is shaped to resemble a natural peak flow hydrograph. The default channel maintenance flow (peaking at 220 cfs for 36 hours) should complement the base flow regime and help create and maintain channel dimensions and substrate characteristics to support physical fish habitat over the long term. The default downramping schedule Figiure 2-2, Proposed Final Fish and Wildlife Program) reflects a downramping rate of less than 1 to 2 inches per hour to reduce the risk of any fish stranding downstream when transitioning back to base flows.
81	USFWS Enclosure	Page 54	Section 3.2.2.2 Channel Maintenance Flow Regime	Reestablish channel maintenance flows that maintain bedform diversity and sediment continuity, maintain fish passage through all river reaches, and avoid fish stranding during down-ramping.	The default channel maintenance flow (Table 2-2 and Figure 2-2, Supporting Information Document) was developed based on field studies, modeling, and peak flow statistics in similar unmanaged Alaskan rivers and is shaped to resemble a natural peak flow hydrograph. The default channel maintenance flow (peaking at 220 cfs for 36 hours) should complement the base flow regime and help create and maintain channel dimensions and substrate characteristics to support physical fish habitat over the long term. The default downramping schedule (steps 4-11 in Table 2-2, Supporting Information Document) reflects a downramping rate of less than 1 to 2 inches per hour to reduce the risk of any fish stranding downstream when transitioning back to base flows.

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82	NVE	Page 54	Section 3.2.2.2 Channel Maintenance Flow Regime	High flows are essential to mimic beneficial flooding. Seven of the nine alternatives proposed much more water during high flows, yet the Draft Program Plan settles on the lowest water discharge for channel maintenance flows of all discharges proposed. The maintenance flow regime in the preferred alternative is severely inadequate because it fails to return the river to its natural flow. 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 offchannel habitat. 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." 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.	The default channel maintenance flow (Table 2-2 and Figure 2-2, Supporting Information Document) was developed based on field studies, modeling, and peak flow statistics in similar unmanaged Alaskan rivers and is shaped to resemble a natural peak flow hydrograph. The default channel maintenance flow (peaking at 220 cfs for 36 hours) should complement the base flow regime and help create and maintain channel dimensions and substrate characteristics to support physical fish habitat over the long term. The default downramping schedule (steps 4-11 in Table 2-2, Supporting Information Document) reflects a downramping rate of less than 1 to 2 inches per hour to reduce the risk of any fish stranding downstream when transitioning back to base flows. Furthermore, the Project Owners recognize that a fixed wheel gate might be warranted in the future to better manage future spill events if climate change causes inflows to the resevoir to increase significantly and to provide for a higher magnitude channel maintenance flow (if needed). Therefore, in the Proposed Final Fish and Wildlife Program, the Project Owners have committed to conducting a more detailed feasiblity study of the fixed wheel gate within three years of the Governor's issuance of the Final Fish and Wildilfe Program. If found feasible and cost effective, on the 10th anniversay after initiating instream flows, the Project Owners will confer with the Committee to reevaluate the need for a fixed wheel gate based on information gathered from monitoring durth that 10-year period.
83	USFWS Enclosure	Page 57	Section 3.3.1 Public Water Supply	Implement stream crossing structures that promote stream functionality and flood resiliency.	Providing year-round instream flows to the Eklutna River will likely make all of the existing ford crossings along the AWWU access road impassable for most of the year. To mitigate these potential impacts, the Project Owners will construct eight new bridges, one at each of the existing ford crossings to allow AWWU year-round access to the AWWU pipeline for maintenance. The new bridges will be designed to pass the same flows as the two existing AWWU bridges. The existing ford crossings will be removed to prevent anyone from attempting to drive through the riverbed in the future.
84	ADFG	Page 57	3.3.2 Recreational Use and Facilities	There are some inaccuracies and incomplete reporting in the last paragraph. In 2021 there were two coho and one Chinook collected. One of the coho collected was determined to be wild and the other one of hatchery origin. The Chinook carcass collected in 2021 was determined to be a wild fish. In 2022 there were two Chinook collected and they were determined to be of hatchery origin. There were also two coho carcasses collected in 2022 but they have not been analyzed.	Thank you for your comment.

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85	Eklutna, Inc.	Page 57	3.3.2 Recreational Use and Facilities	Protection of Native hunting, fishing, and gathering rights is a part of federal law throughout the United States. There was no discussion of subsistence rights and resources in the study. This analysis would be included in a Federal Energy Regulatory Commission relicensing process. We believe the public would expect a detailed description of subsistence resouces along the Eklutna River. Rather than discuss Eklutna River public and subsistence resources, the Program inexplicably assesses the impacts of an artificial fishery - Eklutna Tailrace. Please explain the obligation to mitigate an artificial fishery created to substitue for the destruction of a prominent salmon run less than 10 miles away. We do not understand why that impact is worth considering while the evaluation of subsistence fishing is essentially ignored.	The substantial measures that will be advanced in the Proposed Final Fish and Wildlife Program will significantly improve the prospects of subsistence resources in the Eklutna River. Based on studies and analysis, we anticipate the instream flows and habitat improvement measures that we commit to will significantly increase fish spawning and rearing habitat over existing conditions that will in turn create potential opportunities for subsistence fishing. It is a fishery used and enjoyed by a significant number of Alaskans and the Project Owners are obligated to take into account the value that fishery provides as we develop our Proposed Final Fish and Wildlife Program. Indeed, the presence of the tailrace fishery can assist greatly in mitigating fishing pressure in the Eklutna River on any fish populations that are expanding due to the Project Owner's proposed flow and habitat measures.
86	ADFG	Page 58	3.4.2 Water Budgets	Since there is an allocated amount of water for a given year (24,280 acre-feet, Section 3.4.2.1) there is no flexibility built into this plan to increase instream flows above this allocation unless that increase is compensated for the following year. If monitoring indicates that the proposed flow regime is not providing the additional spawning and rearing habitat that has been modeled, then this will make any adaptive management strategy ineffective. The plan as proposed would not have the flexibility to provide more than an incremental increase in proposed flows since the combined maximum discharge of water from the portal valve (80 cfs) and the current dam outlet gate (190 cfs) would not provide the additional water needed to implement other higher flow alternatives such as ADF&G Alternative B... Placing a hard cap on the annual water budget does not allow for effective adaptive management strategies to be implemented, if needed, to ensure the success of the Fish and Wildlife Plan. An initial annual water budget of 24,280 acre-feet may be adequate to assess the effectiveness of the Fish and Wildlife Plan but providing flexibility over the 35-year term of this plan is essential to ensure the success of the program. The addition of the fixed wheel gate to the Fish and Wildlife Plan would provide that flexibility.	In the Proposed Final Fish and Wildlife Program, some modifications have been made to the water budget to increase flexibility: 1.) the year-round instream flow water budget and the channel maintenance flow water budget have been combined, 2.) water can be banked for 5 years instead of 1 year as proposed in the Draft Fish and Wildlife Program, and 3.) 50% of the total annual water budget can be banked at any given time instead of 20% as proposed in the Draft Fish and Wildlife Program. Furthermore, the Project Owners recognize that a fixed wheel gate might be warranted in the future to better manage future spill events if climate change causes inflows to the resevoir to increase significantly and to provide for a higher magnitude channel maintenance flow (if needed). Therefore, in the Proposed Final Fish and Wildlife Program, the Project Owners have committed to conducting a more detailed feasiblity study of the fixed wheel gate within three years of the Governor's issuance of the Final Fish and Wildilfe Program. If found feasible and cost effective, on the 10th anniversay after initiating instream flows, the Project Owners will confer with the Committee to reevaluate the need for a fixed wheel gate based on information gathered from monitoring durth that 10-year period.
87	USFWS Enclosure	Page 58	3.4.2 Water Budgets	The Draft Plan includes conditions limiting the amount of banked water that can be used the following year, limiting how long water can be banked, and setting a May 1 deadline for flow modification requests. While the Service understands the Project owners need to minimize uncertainty to be able to effectively manage operations, we believe the conditions placed on water management restrict the effectiveness of the Adaptive Management Program. Banked water should not expire, and while the Adaptive Management Committee could submit a proposed water budget by May 1, the Adaptive Management Program should have a mechanism to make modifications within the water year if the Committee identifies a need and implementing the change is feasible. The Adaptive Management Committee should include a Project Owner representative.	In the Proposed Final Fish and Wildlife Program, water can be banked for 5 years (instead of 1 year in Draft Fish and Wildlife Program). The Committee must provide a 60-day notice to the Project Owners for any requests to modify the default year-round instream flow regime or the default channel maintenance flow schedule. If the requested flows exceed the operational limitations of the Project infrastructure, the available water budget, or the approved ramping rates, then the Project Owners may reject the requested flow modifications. If the Project Owners reject the requested flow modifications, then they must notify the Committee so that the Committee may request alternative flows if desired. The Committee may request modifications to flows within 60 days; however, the Project Owners are not required to meet the request if it is not operationally feasible. One or more representatives from the Project Owners will serve as non-voting participants on the Committee to provide technical expertise about Project operations.

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88	USFWS Enclosure	Page 58	3.4.2 Water Budgets	There should also be a mechanism to address the water budget should any significant differences be found between modeled and actual habitat gains at different flow release levels.	The annual water budget remains at 24,280 acre-feet for year-round flow release into the Eklutna River and an additional 2,913 acre-feet is available at the beginning of each 10-year period starting the first water year after instream flows are initiated for channel maintenance flow. Based on monitoring results, the Committee may request modifications to the default year-round instream flow regime and/or the magnitude, duration, frequency, or shape of the scheduled channel maintenance flow releases, as long as (1) the requested flows do not exceed the operational limitations of the Project infrastructure, and (2) the ramping rates conform to fisheries ramping rate requirements. If the total volume of water to be released exceeds the available water budget (which includes any banked water that may be available), then that deficit will be carried over into the next water year.
89	ADFG	Page 60	3.4.3.2 Other Monitoring Efforts	Please provide a detailed breakdown of the estimated $270,000 budget for monitoring efforts.	In the Proposed Final Fish and Wildlife Program, the Project Owners have opted to provide a total of $450,000 in April 2024 dollars to ADFG over the length of the Program to fund monitoring efforts in the Eklutna River (Section 3.2, Proposed Final Fish and Wildlife Program). The Committee will develop the monitoring plan and ADFG will implement the monitoring plan and request funds from the Project Owners by July 1 of each year based on the planned monitoring effort for the subsequent year.
90	ADFG	Page 60	3.4.3.2 Other Monitoring Efforts	The draft plan states that the Committee may revise the monitoring plan or seek supplemental funding to conduct additional monitoring efforts if desired. Clarification is needed on where the source of this supplemental funding would come from.	The Project Owners will not provide additional funding but the Committee may pursue other funding sources for monitoring if desired.
91	ADFG	Page 60	3.4.3.2 Other Monitoring Efforts	Because channel maintenance flows are scheduled for fall, they have the potential to scour salmon redds and dislodge incubating eggs. Monitoring efforts should include scour depths in spawning areas to assess impacts of the maintenance flows timing on spawning habitat for adaptive management purposes.	The Committee will develop the monitoring plan, which could include scour monitoring. However, the Project Owners cannot change the general timing of when the channel maintenance flows occur (they have to occur in the fall) but they could change frequency, magnitude, and duration of channel maintenance flows (see Section 3.3.5 of the Proposed Final Fish and Wildlife Program regarding requests to modify flow regime).
92	ADFG	Pages 61-62	3.4.3.2 Other Monitoring Efforts	All monitoring efforts other than discharge are proposed to take place over 5 years except for winter temperature monitoring (3 years). Although the draft plan states that this additional monitoring need not take place in consecutive years, this effort would be inadequate to assess changes or determine long-term trends in fish use and improvements in habitat. Since the success of this program will be evaluated over 35 years a more robust monitoring program should be proposed.	In the Proposed Final Fish and Wildlife Program, the Project Owners have opted to provide a total of $450,000 in April 2024 dollars to ADFG over the length of the Program to fund monitoring efforts in the Eklutna River (Section 3.2, Proposed Final Fish and Wildlife Program). The Committee will develop the monitoring plan and ADFG will implement the monitoring plan and request funds from the Project Owners by July 1 of each year based on the planned monitoring effort for the subsequent year.
93	ADFG	Page 62	3.4.3.2 Other Monitoring Efforts	Hatchery Fish Straying section - Modify first sentence ‘All Chinook and coho carcasses (heads) observed in the Eklutna River during adult salmon surveys should be collected and delivered to ADFG for stock origin analysis to evaluate if straying is occurring and if so, at what proportion to wild escapement.’	In the Proposed Final Fish and Wildlife Program, the Committee will develop the monitoring plan to monitor aquatic habitat conditions and fish utilization in the Eklutna River and the straying rate of hatchery fish from the Eklutna Tailrace to the Eklutna River.

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94	ADFG	Page 62	3.4.3.2 Other Monitoring Efforts	Angler days or catch per unit effort data from the tailrace fishery will not provide information to detect straying from the tailrace into the Eklutna River. Determining potential straying should be based on the results of spawner surveys on the Eklutna River and the results of the stock origin analysis. Project owners should focus the annual coordination with ADFG to determine if straying is occurring on these criteria and not tailrace data.	In the Proposed Final Fish and Wildlife Program, the Committee will develop the monitoring plan including the straying rate of hatchery fish from the Eklutna Tailrace to the Eklutna River. The Committee will provide a report on monitoring efforts to the Project Owners by March 1 of each year.
95	ADFG	Page 62	3.4.3.2 Other Monitoring Efforts	The Draft Fish and Wildlife Plan contains little reference to how the success of the Fish and Wildlife Plan will be evaluated other than goals for the winter temperature monitoring and substrate size. Criteria should be developed to determine if the plan is successful or not, including an increase in spawning and rearing habitat, effectiveness of channel forming flows and general fish abundance.	The Committee will develop appropriate evaluation criteria for the Fish and Wildlife Program (Section 3.1, Proposed Final Fish and Wildlife Program).
96	ADFG	Page 63	3.4.4 Adaptive Management	Paragraph 1 - In addition to determining what monitoring efforts should be conducted annually, a cost estimate should be developed on an annual basis for this effort.	In the Proposed Final Fish and Wildlife Program, the Project Owners have opted to provide a total of $450,000 in April 2024 dollars to ADFG over the length of the Program to fund monitoring efforts in the Eklutna River (Section 3.2, Proposed Final Fish and Wildlife Program). The Committee will develop the monitoring plan and ADFG will implement the monitoring plan and request funds from the Project Owners by July 1 of each year based on the planned monitoring effort for the subsequent year.
97	ADFG	Page 63	3.4.4 Adaptive Management	Paragraph 3 states that the Committee may request modifications to the peak flow releases as long as the total volume of water released in a 10-year period does not exceed 2,913 acre-feet. We assume that this is based on the total amount of water proposed in Table 3.3, Page 55. Please clarify.	Correct, the total volume of water available for channel mainteneance flow releases over a 10-year period is 2,913 acre-feet, which is based on the default channel maintance flows (Table 2-2, Proposed Final Fish and Wildlife Program).
98	ADFG	Page 63	3.4.4 Adaptive Management	The last paragraph states that the Project Owners are not responsible for responding to natural processes that result in undesirable conditions in the river such as debris flows associated with precipitation, beaver activity, large wood build-up, etc. We are therefore assuming that then if any undesirable condition in the river is a result of the provisions of the plan being carried out will be the responsibility of the Project Owners to rectify. For example, if a log jam that blocks fish passage is the result of the release of a channel maintenance flow that the Project Owners would remediate the blockage to fish passage since it would not be the result of a natural event. Maintaining the free passage of fish in the Eklutna River is essential to the success of the Fish and Wildlife Plan and should be incorporated into the plan.	The Committee is being funded to evaluate habitat conditions in the future which should identify any changed conditions in the river that might be undesirable. Also, the Committee is being funded to address opportunties for habitat improvement, which could include addressing things like log jams, which clearly would be a "natural event". The Project Owners do not acknowledge any responsibility for addressing such future potential conditions.

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99	USFWS	Page 63	3.4.4 Adaptive Management	Provide more flexibility in the Adaptive Management Plan so that PMEs can be implemented as effectively as possible.	The following modifications have been made to Adaptive Management (Section 3.3, Proposed Final Fish and Wildlife Program) to provide more flexibility: 1.) the year-round instream flow water budget and the channel maintenance flow water budget have been combined, 2.) water can be banked for 5 years instead of 1 year, 3.) 50% of the total annual water budget can be banked at any given time instead of 20%, 4.) starting 10 years after instream flows are established, the Project Owners will compare the average annual inflows to Eklutna Lake for the last 10 years to the previous 10-year period, any increase in average annual inflows due to climate change will be split 50/50 between hydropower and the annual water budget for instream flows, and 5.) the Project Owners will provide a total of $350,000 in April 2024 dollars to ADFG to fund physical habitat enhancement and vegetation management efforts.
100	USFWS Enclosure	Page 63	3.4.4 Adaptive Management	Provide ongoing protection through continued collaboration so that adaptive management and monitoring remains effective and takes advantage of available resources. The goal of an adaptive management program is to maximize the effectiveness of these PME measures. The plan should be structured such that PME measures have elements; each element has objectives and monitoring to measure success; and PME measures have strategies listed for adaptive management, as described in the Service's letter, September 29, 2023.	A Monitoring and Adaptive Management Committee will be established to execute the Monitoring and Adaptive Management Plan (Section 3.0, Proposed Final Fish and Wildlife Program). The Committee will consist of one voting representative from each of the Signatories to the Implementation Agreement, but it is anticipated that the Committee will make decisions through consensus. The Committee chair will be selected by the members of the Committee. Once the Committee is established, it will develop appropriate evaluation criteria for the Fish and Wildlife Program. These evaluation criteria will help inform monitoring efforts and adaptive management decisions.
4.0 Measures Not Selected for Fish and Wildlife Program					
101	ADFG	Page 65	Section 4.1 Higher Flow Releases from the AWWU Portal Release Facility	This section fails to take into account all aspects of habitat gains by only utilizing spawning habitat for Chinook and coho salmon. The draft plan also needs to include gains in rearing habitat for these species. The section and corresponding figures should be updated to reflect this.	There are increases to rearing habitat under the Proposed Final Fish and Wildlife Program base flow regime; 6.3 acres for Chinook and 9.9 acres for coho (Table 4-9, Supporting Information Document). Also, the Committee is being funded to allow physical habitat manipulation which could include measures to increase rearing habitat.
102	USFWS	Page 65	Section 4.1 Higher Flow Releases from the AWWU Portal Release Facility	Include a higher instream flow regime to increase downstream salmon rearing habitat; the channel maintenance flow regime should be increased commensurate with the increased instream flow regime.	There are increases to rearing habitat under the Proposed Final Fish and Wildlife Program base flow regime; 6.3 acres for Chinook and 9.9 acres for coho (Table 4-9, Supporting Information Document). Also, the Committee is being funded to allow physical habitat manipulation which could include measures to increase rearing habitat.
103	USFWS	Page 67 and Page 73	Section 4.4 Flow Releases from the Existing Dam (RM 12) and Section 4.6 Replacement Dam	Provide water to the full length of the river on a year-round basis.	Flow releases from the existing dam and the replacement dam are the two options considered during the alternatives analysis that would would provide water to the full length of the river. Flow releases from the existing dam would eliminate over 80% of the reservoir storage from being utilized for power generation and loss of power generation when demand is highest, therefore flow releases from the dam was not included in the Proposed Final Fish and Wildlife Program (Section 4.11.4, Supporting Information Document). The cost of the replacement dam and 40% loss of reservoir capacity are the primary reasons dam replacement was not in the Proposed Final Fish and Wildlife Program (Section 4.12.1, Support Information Document).

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104	Eklutna, Inc.	Page 68	Section 4.5 Fish Passage	The historical presence of Eklutna around the Eklutna Lake and land selection issues must be acknowledged and integrated into the decision-making process. In most documents evaluating project alternatives, the original condition of the environment is considered. We suggest including a detailed accounting of the Eklutna River before the 1928 hydroelectric power project, rooted in tribal ecological knowledge from the records of the Native Village of Eklutna and other available sources. The public deserves to understand better what may be gained through connecting the Eklutna Lake to the Inlet. Currently, the Program advances selective studies dispelling the existence and viability of sockeye in the Ekutna Lake. A fair and balance document would include the narrative on pre-1928 River condition.	While we have acknowledged and studied historical aspects of Eklutna Lake and the Eklutna River, we disagree that we must examine the pre-1928 Eklutna River conditions as any type of baseline as opposed to looking at existing conditions in the Eklutna River. No such requirement exists in the 1991 Agreement or under Federal Energy Regulatory Commission relicensing proceedings, on which the 1991 Agreement is modeled. As stated above, the 1991 Agreement does not place upon us (and our members and taxpayers) the legal or contractual requirement or responsibility to study or address all adverse effects of all hydroelectric development in the Eklutna River basin over the past 100 years.
105	USFWS	Page 68	Section 4.5 Fish Passage	The Draft Program does not address fish passage; it proposes to release a baseline level of year-round instream flows from the Anchorage Water and Wastewater Utility portal valve located approximately 1 mile downstream from the Eklutna Lake dam, and it does not propose infrastructure changes to accommodate the higher flows required for channel and habitat maintenance. As drafted, we believe the Program does not entirely meet the intent of the 1991 Agreement, which was established in part due to concerns for the sockeye salmon run.	The Proposed Final Fish and Wildlife Program includes a limited fish passage reopener (Section 4.2). With this limited reopener, the Project Owners recognize that fish passage may become feasible in the future and fish passage is important to NVE, the federal and state agencies, and others who have commented on the Draft Program. If a new, proven methodology or technology becomes available, then the Committee may reevaluate the potential for the construction and operation of fish passage facilities both into and out of Eklutna Lake on its own initiative or at the request of any of the resource agencies or NVE. Fish passage measures must meet certain criteria (see Section 4.2 of the Proposed Final Fish and Wildlife Program).
106	USFWS	Page 68	Section 4.5 Fish Passage	The Program should provide connectivity to the lake, release year-round instream flows sufficient to support salmon spawning and rearing habitats throughout the river corridor, and accommodate periodic high-volume flows that maintain habitat characteristics through a self-sustaining dynamic equilibrium between the hydrograph and natural sediment supply. The Service acknowledges the appreciable costs associated with a Program that adequately addresses sockeye salmon and other stakeholder concerns. However, we do not believe that cost alone is a compelling enough argument to dismiss the Eklutna Lake sockeye salmon fishery, which was the primary driver for the 1991 Agreement. Recognizing this divide, the Service recommends a phased approach which sets interim terms or benchmarks to spur incremental progress towards a long-term and mutually agreeable solution that ultimately provides fish passage at the dam and instream flows capable of supporting fish and wildlife into the future.	Cost alone was not the sole reason fish passage was not selected for the Fish and Wildlife Program: upstream volitional fish passage would have significant effects on the hydropower project, particularly during the winter when it is needed most, and there are significant concerns regarding the effectiveness of downstream fish passage (i.e., low attraction flow velocities and/or the inability to operate the downstream fish passage facilities while the lake is frozen over). Section 4.11.9 of the Supporting Information Document presents lake study results and justification for the exclusion of upstream and downstream fish passage measures. The Project Owners recognize that fish passage may become feasible in the future and fish passage is important to NVE, the federal and state agencies, and others who have commented on the Draft Program. Therefore, the Proposed Final Fish and Wildlife Program includes a limited fish passage reopener (Section 4.2). With this limited reopener, if a new, proven methodology or technology becomes available, then the Committee may reevaluate the potential for the construction and operation of fish passage facilities both into and out of Eklutna Lake on its own initiative or at the request of any of the resource agencies or NVE. Fish passage measures must meet certain criteria (see Section 4.2 of the Proposed Final Fish and Wildlife Program).

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107	USFWS	Page 68	Section 4.5 Fish Passage	Provide a long-term solution to get marine derived nutrients from the river to the lake. We have expressed openness to a phased approach in returning sockeye salmon to the lake. The Final Program should provide a commitment to design a phased approach within five-years of the Final Program.	It has been theorized, but not studied, that if fish passage was provided into Eklutna Lake, the spawning salmon would bring enough marine derived nutrients with them (Section 4.12.6.1., Supporting Information Document). The Project Owners recognize that fish passage may become feasible in the future and fish passage is important to NVE, the federal and state agencies, and others who have commented on the Draft Program. Therefore, the Proposed Final Fish and Wildlife Program includes a limited fish passage reopener (Section 4.2). With this limited reopener, if a new, proven methodology or technology becomes available, then the Committee may reevaluate the potential for the construction and operation of fish passage facilities both into and out of Eklutna Lake on its own initiative or at the request of any of the resource agencies or NVE. Fish passage measures must meet certain criteria (see Section 4.2 of the Proposed Final Fish and Wildlife Program).
108	USFWS Enclosure	Page 68	Section 4.5 Fish Passage	A sustainable Eklutna River fishery requires that fish have access to both lateral and headwater habitats. Effects of hydropower development and operation cannot be fully mitigated without reconnecting the river and the lake.	The Proposed Final Fish and Wildlife Program includes a limited fish passage reopener (Section 4.2). With this limited reopener, the Project Owners recognize that fish passage may become feasible in the future and fish passage is important to NVE, the federal and state agencies, and others who have commented on the Draft Program. If a new, proven methodology or technology becomes available, then the Committee may reevaluate the potential for the construction and operation of fish passage facilities both into and out of Eklutna Lake on its own initiative or at the request of any of the resource agencies or NVE. Fish passage measures must meet certain criteria (see Section 4.2 of the Proposed Final Fish and Wildlife Program).
109	USFWS Enclosure	Page 68	Section 4.5 Fish Passage	The Service believes the extent of tributary habitats upstream of Eklutna Lake that are suitable for salmon spawning is significant to the understanding of loss associated with dam construction and operation, and potential gains associated with an alternative that includes fish passage at the dam.	The Proposed Final Fish and Wildlife Program includes a limited fish passage reopener (Section 4.2). With this limited reopener, the Project Owners recognize that fish passage may become feasible in the future and fish passage is important to NVE, the federal and state agencies, and others who have commented on the Draft Program. If a new, proven methodology or technology becomes available, then the Committee may reevaluate the potential for the construction and operation of fish passage facilities both into and out of Eklutna Lake on its own initiative or at the request of any of the resource agencies or NVE. Fish passage measures must meet certain criteria (see Section 4.2 of the Proposed Final Fish and Wildlife Program).
110	USFWS Enclosure	Page 68	Section 4.5 Fish Passage	Also, the Service proposed spill with turbulent attraction flows as an additional downstream passage mechanism that was included in three alternatives (ND-2ST, ND-1ST, and ND-FL7ST). The idea was to use active methods (like water jets and propellors) to generate adequate attraction flows at the dam to support volitional downstream fish passage, all while not impacting the instream flow regime because the attractant flows would be returned to the lake once the juvenile fish reached a bypass gate. This measure was not discussed in the in Draft Program.	This has been included as part of the preferred alternative by USFWS within the Proposed Final Fish and Wildlife Program.

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111	USFWS Enclosure	Page 68	Section 4.5 Fish Passage	Restore wild sockeye salmon runs by implementing mechanisms for fish passage into and out of the lake, expediting the reestablishment of the runs, implementing other lake enhancements that increase nutrients and the quality of and access to spawning habitat, and reducing entrainment at the intake.	The Proposed Final Fish and Wildlife Program includes a limited fish passage reopener (Section 4.2). With this limited reopener, the Project Owners recognize that fish passage may become feasible in the future and fish passage is important to NVE, the federal and state agencies, and others who have commented on the Draft Program. If a new, proven methodology or technology becomes available, then the Committee may reevaluate the potential for the construction and operation of fish passage facilities both into and out of Eklutna Lake on its own initiative or at the request of any of the resource agencies or NVE. Fish passage measures must meet certain criteria (see Section 4.2 of the Proposed Final Fish and Wildlife Program).
112	NVE	Page 69	Section 4.5.1 Lake Studies	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. Our 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 stem and tributaries. NVE's Land and Environment Department has concluded that there are over 15 miles of salmon habitat in the upper tributaries.	The Project Owners have acknowledged the habitat in the East and West Forks of Eklutna Creek (Section 4.11.9.1, Supporting Information Document) and coordinated with and included NVE data in their "Eklutna Lake Aquatic Habitat and Fish Utilization Year 2 Study Report", available at eklutnahydro.com.
113	NVE	Page 69	Section 4.5.1 Lake Studies	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. 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. 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]." 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. A co-author of the paper recently stated that "[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."	The results of the lake study program, developed in consultation with and concurred with by the Parties, found low primary productivity and apparently unhealthy resident kokanee populations.

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114	NVE	Page 69	Section 4.5.1 Lake Studies	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 […]" 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.	Thank you for your comment. These potential habitat gains were taken into consideration during the alternatives analysis.
115	NVE	Page 69	Section 4.5.1 Lake Studies	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. 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.	Comment noted.
116	ADFG	Page 70	Figure 4-3. Typical spawning Kokanee in Eklutna Lake (left) vs. other lake systems (right).	"other lake systems Kokanee" should be identified by collection location. Is this fish from Alaska or the lower 48? Alaska kokanee are typically smaller than those from warmer systems in the lower 48 and either an Alaskan fish should be presented or the fish identified as from the lower 48 and not necessarily representative of a typical Alaskan kokanee.	Eklutna Lake kokanee were compared to sockeye salmon from four lakes in Alaska (Karluk Lake, Tikchik Lake, Chignik Lake, and Bare Lake) and kokanee from lakes in British Columbia, Montana, and Japan. There is limited data available for kokanee in Alaska because they are less common than ocean-run Sockeye. Location information is provided in Table 4.3-2 of the Eklutna Lake Aquatic Habitat and Fish Utilization Final Year 2 Study Report available at eklutnahydro.com.
117	Eklutna, Inc.	Page 73	4.6 Replacement Dam	We appreciate the Program recognizing Eklutna, Inc.'s contributions to the financial pro forma for the dam replacment. Eklutna, Inc. only reviewed the earth-moving aspects of replacement. It would be advised to seek estimates from industry professionals on the other civil aspects of replacing a dam to ensure the project costs can be trusted.	The cost estimates developed by McMillen were Class V estimates. If the replacment dam is advanced, more detailed engineering will be conducted.

No.	Entity	Page	Section, Table, or Figure	Comment	Response
118	Eklutna, Inc.	Page 73	4.6 Replacement Dam	We request a detailed discussion on the financial implcations of dam replacement and the accuracy of revenue generation estimates. During project meetings, revenue figures for the utilities benefiting from the water in Eklutna Lake have been bandied about without an explanation or details. We request to include a section on the specific economics of the project. This is likely public information that should be easily attainable to provide to the public as part of their Program review.	Details were provided at alternative analysis meetings and were repeated in Appendix D of the Draft Fish and Wildlife Program and Appendix C of the Supporting Information Document. Presentations from the alternatives analysis meetings are available on the project website at eklutnahydro.com.
119	ADFG	Pages 74-75	4.8 Physical Habitat Manipulation	Physical habitat manipulation should be incorporated into this draft plan. While there is potential federal funding for this, there is no guarantee that this outside funding can be secured. To ensure that this plan will effectively promote the anticipated positive effect on fish and their habitats physical habitat improvements should be included.	Physical Habitat enhancement is included in the Proposed Final Fish and Wildlife Program (Section 3.3.6). The Project Owners will provide a total of $350,000 in April 2024 dollars to ADFG during the Program to fund physical habitat enhancement and vegetation management efforts in the Eklutna River. The Committee will develop a plan to implement physical habitat enhancement and vegetation management efforts in the Eklutna River.
120	ADFG	Pages 74-75	4.8 Physical Habitat Manipulation	Additionally, woody vegetation has encroached on the channel due to limited flows. The impacts of the vegetation in the channel, after some flow is returned to the river, should be assessed to determine if this vegetation needs to be managed to fully realize the projected habitat gains presented in the plan.	Physical Habitat enhancement is included in the Proposed Final Fish and Wildlife Program (Section 3.3.6). The Project Owners will provide a total of $350,000 in April 2024 dollars to ADFG during the Program to fund physical habitat enhancement and vegetation management efforts in the Eklutna River. The Committee will develop a plan to implement physical habitat enhancement and vegetation management efforts in the Eklutna River.
121	USFWS	Pages 74-75	4.8 Physical Habitat Manipulation	Include physical habitat manipulation as components in both the Program as well as in the Adaptive Management Plan.	Physical Habitat Enhancement is included in the Proposed Final Fish and Wildlife Program (Section 3.3.6). The Project Owners will provide a total of $350,000 in April 2024 dollars to ADFG during the Program to fund physical habitat enhancement and vegetation management efforts in the Eklutna River. The Committee will develop a plan to implement physical habitat enhancement and vegetation management efforts in the Eklutna River.
122	USFWS Enclosure	Pages 74-75	4.8 Physical Habitat Manipulation	The Draft Program excludes any physical habitat manipulation that would adjust the river to the new flow regime because, it says, Federal funding is being pursued for this work. However, the Service believes physical habitat manipulation should be included in the Program because it will be important mitigation for the impacts of the project, and because grant funding is not guaranteed. Habitat manipulation should be included in the Adaptive Management Program since funding, designing, and implementing projects will require a collaborative strategy to ensure concerns are addressed and habitat goals are met.	Physical Habitat Enhancement is included in the Proposed Final Fish and Wildlife Program (Section 3.3.6). The Project Owners will provide a total of $350,000 in April 2024 dollars to ADFG during the Program to fund physical habitat enhancement and vegetation management efforts in the Eklutna River. The Committee will develop a plan to implement physical habitat enhancement and vegetation management efforts in the Eklutna River.
123	USFWS Enclosure	Pages 74-75	4.8 Physical Habitat Manipulation	Create self-sustaining instream, off-channel, and lake habitat for fish and wildlife. Design instream and floodplain habitat enhancements so that the channel is fitted to the watershed hydrology and sediment loads so that there is channel complexity, floodplain and wetland connectivity, and riparian function.	Physical Habitat enhancement is included in the Proposed Final Fish and Wildlife Program (Section 3.3.6). The Project Owners will provide a total of $350,000 in April 2024 dollars to ADFG during the Program to fund physical habitat enhancement and vegetation management efforts in the Eklutna River. The Committee will develop a plan to implement physical habitat enhancement and vegetation management efforts in the Eklutna River.

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124	ADFG	Page 75	4.9 Lakeside Trail Repairs	Regardless of funding secured by the State of Alaska to address current damage to the trail system, additional funding should be dedicated to remediating any additional trail damage that occurs as a result of project operations.	In the Proposed Final Fish and Wildlife Program, the Project Owners will provide a one-time payment of $234,000 to Chugach State Park for lakeside trail repairs that address erosion impacts.
125	USFWS Enclosure	Page 75	4.9 Lakeside Trail Repairs	Improve water quality at the lake by implementing measures to stabilize banks.	During past spill events, high lake levels have caused erosion along discrete segments of the lakeside trail. Chugach State Park has received $234,000 in funding for general lakeside trail repairs. Within 120 days of the Governor's approval or by January 31, 2025, whichever comes later, the Project Owners will provide a one-time payment of $234,000 to Chugach State Park (or another entity as directed by Chugach State Park) for lakeside trail repairs that address erosion impacts. This funding match brings the total budget for lakeside trail repairs to $468,000.
6.0 Next Steps					
126	Eklutna, Inc.	Page 80	Governor's Issuance of a Final Fish and Wildlife Program	The Program outlines the remaining process for public review and the Governor's decision on the final Program. The utility-driven public process is understood, but the Governor's Public Interest Determination (Determination) process is not well-defined. The Program alludes to the Alaska Energy Authority leading the State evaluation process; however, that agency would be an unlikely conadidatefor executing a public process and delivering a decision on the Governor's behalf. We request greater clarity on which agency or division within the State of Alaska will be responsible for the public process and the Gevernor's Determination decision.	The Governor assigned AEA as the Governor's representative for the project. AEA has attended all stakeholder meetings throughout the process and will advise the Governor. The Project Owners have faithfully implemented the process outlined in the 1991 Agreement and will be submitting the Proposed Final Fish and Wildlife Program to the Governor. The Project Owners defer to the Governor with respect to how the State of Alaska implements the Governor's review and approval process.
127	NVE	Page 81	Section 6.6 Additional Requirements to Implementing the Fish and Wildlife Program	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 44944.103 However, it does not describe any strategies the Project Owners have developed for securing necessary permits or land rights 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."	A Final Fish and Wildlife Program is needed to pursue these additional requirements. The 1991 Agreement schedule allows for 3 years after the governor's approval to for the Project Owners to obtain these additional requirements.
128	NVE	Page 81	Section 6.6 Additional Requirements to Implementing the Fish and Wildlife Program	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.	As with any project of this nature, we will have to obtain permits, land rights, and easements, and water rights amendents to implement the Final Fish and Wildlife Program. We see no reason why we will not be able to achieve the such additional requirements that are preconditions to our ability to implement the Fish and Wildlife Program.

No.	Entity	Page	Section, Table, or Figure	Comment	Response
129	NVE	Page 81	Section 6.6 Additional Requirements to Implementing the Fish and Wildlife Program	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"). Further, any DOI decision approving conversion would be a federal action requiring compliance with NEPA and ESA section 7.	The Land and Water Conservation Fund implications were discussed in the July 2023 Alternatives Analysis meeting. We agree a DOI decision regarding a conversion would be a federal action requiring compliance with NEPA and ESA Section 7.
130	NVE	Page 81	Section 6.6 Additional Requirements to Implementing the Fish and Wildlife Program	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.	The Project Owners are aware of the potential need for a Clean Water Act permit from the U.S. Army Corps of Engineers and agree that such permitting decisions would also be a federal action subject to compliance with NEPA and ESA section 7.
131	NVE	Page 81	Section 6.6 Additional Requirements to Implementing the Fish and Wildlife Program	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.	A Final Fish and Wildlife Program is needed to pursue these additional requirements. The 1991 Agreement schedule allows for 3 years after the governor's approval to for the Project Owners to obtain these additional requriements.
General					
132	NVE			NVE was not consulted in the negotiation of the Agreement and is not a party to the Agreement. Rather than rectify that historic injustice, the Project Owners denied our request to be formally recognized as a consulting government and for treatment as a party to the Agreement during this process. The Project Owners' decision appears based on their preference and convenience rather than any legal or moral principle.	In April 2020, NVE requested formal recognition as a consulting government, with their Land and Environment Department analogous to other governmental signatories, for purpose and processes of the 1991 Agreement applicable to the Project. In a May 2020 letter to the Project Owners, NVE recognized that amending the 1991 Agreement may entail substantial time and effort, and as an alternative invited a joint letter from the Project Owners to the effect that the Project Owners will act in good faith to help mitigate impacts to the Eklutna River and that the Project Owners will recognize NVE as a consulting government on a basis comparable to the governmental signatories to the 1991 Agreement. In June 2020, the Project Owners responded to NVE's request by committing to a review and participation framework that ensures information NVE and its members share regarding the Eklutna River and development of the Fish and Wildlife Program is appropriately considered and addressed.

No.	Entity	Page	Section, Table, or Figure	Comment	Response
133	NVE			The Project Owners describe their voluntary efforts to meet with and consider information provided by NVE, but these efforts offer no substitute for party status or treatment of NVE as a consulting government. For example, after explaining that NVE is not entitled to participate in the consultation process under the Agreement, the Project Owners promise that "if the process set forth in the Agreement bears out the release of water from Eklutna Lake and the addition of salmon into the Eklutna River as part of the Fish and Wildlife Program, we will be prepared to support it." This is not a promise NVE can or should be asked to rely upon given that the Project Owners have substantially different interests than NVE, have exerted total control over the consultation process, and have excluded NVE from full participation in that process.	NVE has been involved in every step of the process including the initial consultation meetings, all four Technical Work Groups (TWGs), the alternatives analysis, and attempts to resolve differences. The Project Owners have also met with the NVE Tribal Council on several occasions, including meetings with the Boards of Directors for both CEA and MEA and the Anchorage Assembly. Based on the study results, the Project Owners made a commitment early in the alternatives analysis process to provide year-round flow releases into the Eklutna River, which was the basis of the draft program and continues to be the basis of the proposed final program.
134	NVE			The Eklutna River ecosystem, including its fish and wildlife resources and particularly its salmon runs, is fundamental to the historical properties and traditional and cultural resources of the Eklutna People. The dewatering of the river and destruction of salmon are adverse effects of the Project that have already degraded and threaten to destroy the significance of these properties and resources. The Project Owners are required to afford protection to these cultural resources.	Comment noted.
135	NVE			Eklutna Dena'ina's health, families, and culture depend on restoring salmon to the Eklutna River. Rather than fully evaluate alternatives that would avoid, minimize, or mitigate the project's adverse effects, as would generally be required for the relicensing of any other similarly-sized non-federal hydropower project, the Project Owners have put forward a Draft Program that would maintain those adverse effects by continuing to dewater a portion of the lower Eklutna River and deny salmon access to the majority of the system's salmon habitat for the next 35 years. The Draft Program shows that the Project Owners did not fully evaluate alternatives that would mitigate and enhance, let alone avoid or minimize the Project's ongoing impacts to sockeye, Chinook, and coho salmon habitat even though the loss of the sockeye salmon run was one of the express reasons for the Agreement.	The alternatives analysis was very comprehensive, up to and including the dam replacement alternative (Section 4.5, Supporting Information Document).

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136	NVE			If the Project had not received a unique exemption from federal regulation, FERC, with assistance from the Project Owners, would be required to follow specific procedures in consulting with NVE under the National Historic Preservation Act ("NHPA") section 106 before deciding whether to continue or modify project facilities or operations over the next 30-year term. In overseeing the Section 106 consultation process, FERC would be required to evaluate and reach agreement with NVE and other consulting parties on "ways to avoid, minimize or mitigate the adverse effects" of the Project. In other words, the range of alternatives and alternative measures considered in a Section 106 process would not be limited to only those advantageous to the Project Owners. Also, NVE would have a role in overseeing and enforcing the Project Owners' compliance with any agreement resolving the Project's adverse effects.	The required process was not a FERC licensing process but rather the 1991 Agreement required a very specific set of actions by the Project Owners to study and evaluate potential protection, mitigation, and enchancement measures for addressing the project's effects on fish and wildlife resouces.