

FAQ's on the Power companies' Draft Fish and Wildlife Program

What is happening with the Eklutna Hydro Project?

The Eklutna Hydroelectric Project, built in 1955, has dried up the lower Eklutna River and cut it off from the lake and upper tributaries for 73 years. An earlier dam, removed in 2018, blocked the river starting in 1929. Currently, no water flows from Eklutna Lake to Eklutna River, as 90% of the water is diverted for hydropower and 10% for Anchorage drinking and wastewater. This river used to be a thriving salmon river with all 5 species of salmon that the Eklutna People have relied on for generations. These populations still hold on in drastically diminished numbers in the last few miles of the river where Thunderbird Creek contributes adequate flows.

The Eklutna Hydroelectric Project owners include Chugach Electric Association (CEA), Matanuska Electric Association (MEA), and Municipality of Anchorage (MOA). When the Eklutna Owners purchased the project in the 1990's, they did not have to go through Federal Energy Regulatory Commission (FERC) licensing that governs most dams. As a substitute, the [1991 Fish and Wildlife Agreement](#) requires the Eklutna Owners to develop measures to protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat). The deadline for their fish and wildlife program is here.

The Eklutna Owners have come up with a plan that would keep the dam as it is and pull water from the lake, direct it through an Anchorage Water and Wastewater Utility (AWWU) pipe, and release it a mile downstream of the dam. This plan would cost rate payers \$57 million, only release a small amount of water, and continue to leave a mile of river directly below the dam dry. Their plan would maintain a dead-end river and prevent salmon from reaching their spawning grounds in Eklutna Lake and its upper tributaries.

Why are they making changes?

The Eklutna Owners are legally required, as per the [1991 purchase agreement](#), to come up with a Fish and Wildlife Program. The purpose of this program is to develop and implement measures to "protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" to counteract impacts of hydroelectric development in the Eklutna Valley. They are legally required to fix the river destroyed by the hydropower.

The Eklutna hydro project was not subject to Federal Energy Regulatory Commission (FERC) licensing. FERC licensing would require fish passage between the river and the lake and continuation of the flow of water from the lake to the river. If this project was subject to FERC licensing before it was built and could not meet its requirements, it is possible it would not have been built. Additionally, if this project was proposed today, and an intact salmon river within Anchorage was about to be decimated, it is very unlikely people would have supported this project.

How much did the power companies pay for the Eklutna Hydroelectric Project?

The original cost for the Eklutna Hydroelectric Project was \$33 million in 1953, which equals \$377 million in today's dollars. The Eklutna Owners purchased the project from the federal government for \$6.7 million in 1997. The power companies paid an artificially low cost for the project and were given 25 years to secure funding to pay for the mitigation required under the Fish and Wildlife Agreement. The power companies assert that they did not save for this known mitigation expense, and they intend to pass all mitigation costs on to ratepayers and taxpayers. The power companies claim that Eklutna Hydropower is the cheapest energy in Southcentral Alaska, which is only true because the real costs were borne by the Eklutna People, the Southcentral fishing public, the river, salmon, wildlife, and the entire Eklutna watershed ecosystem.

How much energy is produced by the Eklutna Hydroelectric Project?

The Eklutna Hydro Project produces 40-47 MW, which is 2.2% of the Railbelt's 2000 MW installed generation capacity. As a portion of CEA and MEA combined installed generation capacity, it's about 3.5%.

Why is the Draft Fish and Wildlife Program proposed by the Power companies bad?

The Draft Fish and Wildlife Plan does not meet the 1991 Purchase Agreement mitigation requirements:

- The Plan leaves a mile of the river dry, which does not connect the river to the lake.
- Sockeye salmon need the lake and Chinook and coho need the lake's tributaries for spawning and rearing.
- Access would still be denied to 65% of the Eklutna watershed system salmon habitat.
- US FWS and NMFS have told power companies that without year-round water the entire river length, this plan does not meet the 1991 agreement's intent.
- The Plan does not provide adequate in-stream flow below the lake dam for full salmon recovery even in that section. Historic side channels and off-channel habitat would not be re-watered. 40cfs summer flow with 220cfs flushing flows is not enough; NMFS recommends 160cfs in summer, and 700cfs flushing flows. Historic bank full flows were 1400cfs.
- We cannot expect 99% habitat recovery with 3% of historic instream flows.
- The Plan continues harm to the Native Village of Eklutna (NVE), and the Southcentral public, who have suffered with a blocked river for 94 years.
- Rather than rectify historic injustice and 94 years of a degraded river with few salmon, the Owners denied NVE's request to be recognized as a consulting government or as a party to the agreement.

Additionally, the Anchorage Assembly hired engineer Don Spiegel, who helped design the AWWU infrastructure, to do [an analysis](#) of the power companies' draft plan. He found that the portal valve cannot provide adequate flows to restore the river. Furthermore, the pipe system goes through regular and unexpected maintenance each year. That means that water flow must be ceased and now water would flow down the river at certain times. This could have catastrophic consequences for fish and their eggs downstream, thereby greatly missing the mark of the reason for the agreement's purpose in the first place.

How would salmon be affected? Why is the draft plan bad for salmon?

The draft plan does not include adequate in-stream flow for meaningful river or salmon restoration and does not allow fish passage between the river and the lake by keeping the dam unchanged *and* leaving a mile of the river below the dam dry.

To get into more detail, the draft plan includes releasing only 40 cubic feet per second (cfs) in the summer and 27cfs in the winter, with occasional flushing flows of 220 cfs. Historic summer flows were [above 1000 cfs](#), with bank full measurements at 1400 cfs, and occasional floods of 4000 cfs. Their plan, therefore, claims to bring back a river with only 3% of historic flows.

In terms of habitat, the Owners proposed that their summertime flow regime of 40 cfs would restore well over 90% of the chinook and coho spawning habitat. This was 90% of the area that they studied and did not include historic riverbank data (see FAQ "What was the quality of science the power companies used" below). This figure does not include different side channels or multiple streams off the main channel that could be rewatered below the dam only with higher flows. The Owners' studies said that habitat increases in side channels that occur in flows up to 150 cfs and higher flows again see an increase in floodplain channels and rearing habitat (see page 88 of their [instream flow study](#)).

The Owners also fail to acknowledge that sockeyes need the lake habitat for spawning and rearing. Sockeyes were the main impetus for the need for the Fish and Wildlife Agreement, and they could potentially be the most productive stock in the system. Additionally, much of the best spawning and rearing habitat for coho and Chinook salmon are in the upstream tributaries above Eklutna Lake. The 15 stream miles in the lake and its upstream tributaries account for 65% of the available salmon habitat, critical for salmon to complete their entire life cycles.

What are other groups proposing and why?

The Native Village of Eklutna, along with Trout Unlimited, The Conservation Fund, and the Alaska Center have put forth a [Community Supported Alternative](#): to fully restore the Eklutna River by removing the dam in the next decade (when other renewable energy comes online). Instead of wasting ratepayer and taxpayer money on a mitigation plan that won't solve the problems, the Native Village of Eklutna and partner organizations propose simply removing the Eklutna Lake dam, fully reconnecting the river, and returning the water flows needed to support the river and its fisheries. They understand the reliance on this hydroelectric energy

source in the near-term and propose removing the Eklutna Lake dam within the next decade, when replacement renewable energy is expected to be available.

THE BENEFITS

- Address a century of cultural and environmental neglect.
- Restore the Eklutna River to flow naturally out of Eklutna Lake.
- Re-connect the river to the lake, allowing for the recovery of sockeye, Chinook, and coho salmon, opening 65% of their available habitat in Eklutna Lake and its upstream tributaries.
- Save utility ratepayers and MOA taxpayers from rate and property tax hikes to pay for a \$57 million plan with few benefits.
- Provide time to transition to new renewable energy projects.
- Not jeopardize the Anchorage drinking water system infrastructure.
- Protect popular lakeside trails from erosion caused by fluctuating lake levels.

The Native Village of Eklutna's vision for the recovery of their namesake homeland river is clear: the river once again running free and full of abundant salmon. The public has overwhelmingly supported recovery of the Eklutna River as an important community asset to Southcentral Alaska (see [Resources](#) for resolutions of support). We have a once-in-a-generation opportunity to bring more salmon back to the Eklutna watershed and upper Cook Inlet.

Did the Power companies evaluate all alternatives?

The power companies evaluated replacing the dam, modifying the existing dam, and utilizing the AWWU infrastructure to release water in their alternatives analysis (see slide 15 in their public [presentation](#)). They never evaluated dam removal. The Conservation Fund repeatedly asked the power companies to evaluate dam removal as an alternative; NVE also formally [requested](#) this evaluation. Now that the draft plan has been released, other organizations including [Eklutna, Inc.](#) and the [Anchorage Assembly](#) have asked the power companies to fully consider dam removal.

What was the quality of science the power companies used?

The Project Owners spent several years on scientific studies and shared insight with and gained direction from the technical working group (TWG). The technical working group included scientists from and contracted by the power companies' contractor, McMillen Corporation, as well as US Fish and Wildlife Service (US FWS), National Marine Fisheries Program (or NMFS within National Oceanic and Atmospheric Administration), the Native Village of Eklutna (NVE), Trout Unlimited (TU), Alaska Department of Fish and Game (ADF&G), Alaska Pacific University, and other invested members of the community. However, some of the studies they cited and data they collected led to some misleading conclusions about the strength of their plan:

- The Owners cited a 2017 study about the possibility of historic salmon populations in the lake. While the study did not marine-derived nitrogen isotopes, it

did say that a run of up to 15,000 sockeye were possible, which is a large number of salmon for a lake that currently has zero.

- A [lack of baseline](#) data negates claims about how the different alternatives would affect wildlife and their habitat.
- The Plan fails to consider endangered Cook Inlet beluga whales, wildlife who would benefit greatly from more wild salmon in the Upper Cook Inlet.
- The Owners never studied the effect of colder-than-average water on fish populations downstream of the dam with the AWWU portal option.
 - The surface water of a natural lake is the warmest water, but the water that would go through the AWWU portal would be taken from the bottom of the lake where it is coldest most seasons. In subarctic lakes, salmon and trout are sensitive to small temperature changes in the water.
 - The cold water coming from the AWWU portal will probably affect egg survival and rearing; it may also affect abundance and distribution of the food fish eat, namely aquatic invertebrates.
 - In the fall, colder water may cause more icing events in the river, which could also affect eggs and fry. This plan needs to be studied further to understand its true impacts to fish, especially when it is to protect and enhance fish populations.
- The models used by the power companies are flawed; the data input doesn't represent conditions on the ground.
 - Their models were based on data collected from a test release of 150 cfs in 2021. However, natural flows of the river were [over 1000 cfs](#) in the summer, with bank full flows at 1400 cfs. Most members of the TWG (including US FWS, NMFS, TU, and NVE) called for a test flow release much larger than 150 cfs to get closer to the river's historic flow. The power companies refused, and as a result, their models cannot accurately predict habitat gain for flows larger than 200 cfs (see slide 20 of their [presentation](#)).
 - Cross-sections [selected](#) and measured by consultants were not representative; they avoided complex channel types though this is where salmon spawn and rear.
 - The bank full measurements at cross sections were not correctly measured.
 - The channel hasn't seen regular flow in about 70 years, so the historic channel is overgrown and no longer shows traditional characteristics.
 - Their models were based on modern bank full of an anemic single channel through Eklutna Valley, not historic bank full, resulting in their claims that their draft plan can restore 99% of salmon habitat.

Why should we help the Eklutna people?

No one asked the Eklutna people before a dam was built on their river in 1929, which began the collapse of the salmon fishery that the Eklutna people have relied on for generations. It severed

their village from not only their food source, but their connection to their land and community. We have a once-in-a-generation opportunity to right these egregious wrongs.

Additionally, the Eklutna People and Eklutna, Inc. (Anchorage's largest landowner) have done a lot to support the Municipality of Anchorage. In a [letter](#) to the Anchorage Assembly on November 21, 2023, Eklutna, Inc. outlined how it "has accommodated Anchorage, the State, and the federal government at nearly every turn. When a school site is needed—Eklutna is there. When a right of way for major infrastructure lines or highway projects is required—Eklutna is there. When a community wants new trails or an airport easement—Eklutna is there. When the Alaska Railroad wanted hard rock for rail ballasts—Eklutna was there almost to the point of giving up the resource for which Eklutna is named. When the Municipality needs more housing—Eklutna is there. Eklutna has given without consideration for reciprocation. But once, just this once, (they) want reciprocation." Eklutna River salmon resources are too central to Eklutna's cultural identity to remain given up.

Why should I care about this dam?

This is the largest environmental issue right in our backyard in Southcentral Alaska. Many of the environmental issues in Alaska debate what to do with healthy habitat. But this looks more like states in the Lower 48, where habitat has already been destroyed and we are desperately trying to bring it back. This is our once-in-a-generation opportunity to bring back a salmon-producing river to our backyard.

[Dams](#) are [coming down](#) all over the rest of the US. Many states in the Lower 48 no longer consider hydroelectric power to be "[green](#)." We are learning how devastating they are to fish and entire watersheds. Salmon is integral to our identity in Alaska; we are all like the Eklutna People in that salmon brings us food, recreation, and connection to our home and communities. How can we as Alaskans say that we support salmon when we are continuing to let one dam stand in the way of a thriving wild salmon stream within an hour of most of Alaska's population?

Will my rates go up?

The Draft Plan costs \$57 million dollars. They predict a rate increase of .65% for CEA ratepayers, .87% increase for MEA ratepayers, and \$0.54 increase annually for Anchorage taxpayers (see [slide 25](#)).

With any plan, the Owners can incur some of the costs, as they should have since they bought this project for little money and knew this was coming.

In their public meetings, the Owners left out that The Conservation Fund and Trout Unlimited have offered to help secure funds to pay for the dam's removal. The proponents of dam removal understand the reliance on this energy source in the short-term and will give the

power companies ten years to find replacement renewable energy. There is no reason for rates to go up with dam removal unless the power companies want them to.

If the dam is removed, where will our electricity come from?

The proposed dam removal scenario would allow the dam and its hydroelectric plant to continue producing electricity at the current rate for ten years, and it could continue at reduced rates after that. This is ample time to find replacement energy sources.

With the decline of local natural gas sources, our Railbelt grid needs to look to diversify their energy portfolio anyways. [Eklutna, Inc.](#), NVE, and others are looking into alternative energy projects with both MEA and CEA. The Houston solar project was purchased for less than the Eklutna dam, proving that solar energy can be as inexpensive or more so than the Eklutna Hydro Project. There are several potential solar and wind projects around the Railbelt being considered or [built](#). Energy efficiency projects and energy conservation are also likely to make up some of the difference. The Bradley Lake dam, which does not affect salmon so egregiously, has plans to expand in 2027.

Wind, solar, and other renewable sources can easily make up most of the difference of the Eklutna Hydro Project, even if they are not temporally consistent energy sources like the Eklutna Dam. It is also possible to still operate the Eklutna Hydro Project without the dam when the lake level is high enough. A large-scale energy storage plant is planned for development in Healy in 2028. Eklutna pumped hydro could store wind and solar generated energy. [All of these](#) can help make up for the 2-3.5% of energy coming from Eklutna.

Additionally, studies have been done to show how we can diversify our energy sources. [Most alternatives](#) include wind and solar power; other sources include hydroelectric, nuclear and tidal power. “One takeaway is that wind and solar are the cheapest sources of energy on the system,” said Jeremy VanderMeer, a research assistant, during ACEP’s January 19th [presentation](#) to the Senate Resources committee. These alternatives could get us to zero carbon emissions by 2050. Additionally, research is finding that [hydro power may not be as green](#) as we originally thought, as hydro plants producing methane can rival fossil fuel-powered plants.

Will dam removal affect drinking water?

With the dam, the lake fluctuates to much higher and much lower levels than would naturally occur. Because of this, the intake for drinking water in the lake is very low in the lake. With the dam removed, lake levels would fluctuate less extremely, and our drinking water intake would remain unaffected. Additionally, dam removal would not necessitate the use of AWWU infrastructure the way the draft plan does.

There has been no analysis to back claims that natural flows could scour the AWWU pipelines along the river. Additionally, there have been events up to 1000 cfs over recent years. No

scouring to anywhere near the depth of the AWWU pipeline along the river has occurred; it was designed for this. With ten years before the dam is removed, there is plenty of time to assess and remediate hazards to infrastructure that could be affected. NVE is developing a grant application to assess this.

A recent [OpEd](#) stated that “the power companies have been treating Eklutna Lake as a cash register for decades. They even charge us millions of dollars each year for our drinking water. One especially perverse term of this arrangement provides Anchorage with free drinking water if the lake spills into the river, so the power companies work overtime to keep the river dry.”

Will dam removal affect bridges downstream?

- Remember that historic floods sometimes reached 4,000 cfs.
- New Glenn Highway Bridges: “These bridges were constructed in 1975 and have a hydraulic capacity of >4,700 cfs,].” They are slated to be replaced relatively soon anyway and can be designed to handle higher flows.
- Railroad Bridge: “The current bridge pre-dates the existing hydro project and has a hydraulic capacity of >8,000 cfs,” which is more than double the highest flood level.
- Old Glenn Highway Bridge: In the 2015 “[Eklutna River Bridge Hydraulic and Hydrologic Report](#),” the Old Glenn Highway Bridge was only analyzed for safety up to 1,800cfs, which was the 500-year flood level calculated with the dam in place. There was no analysis done as to what the actual maximum hydraulic capacity of the bridge is. The report seems to suggest that the bridge would be more than capable of withstanding occasional flows of up to 4,000cfs, and likely flows far higher. To know what the maximum hydraulic capacity is, additional analysis would be needed, but there’s nothing to suggest it is less than 1,800cfs as stated in the Draft Program.
- The same might be the case for the other bridges, where the hydraulic capacity listed in the Draft Program may be the maximum capacity *analyzed*, but not necessarily the absolute maximum capacity that the bridges could safely withstand, which could be a much higher flow level.

Can Eklutna Lake and its tributaries support salmon?

There are [several lines of evidence](#) supporting historic sockeye in the lake. The Eklutna People had a fish camp at the top of the lake, also at the mouth of the tributaries. They could have been catching Chinook and coho headed upriver to spawn. “[Six elders](#), now deceased, told now Elder Maria Coleman that the Eklutna River used to be ‘overflowing’ with ‘abundant’ fish before the dams. Elder Louis Munson recalled stories of her family fishing for salmon (łiq’a – the generic Dena’ina term for all salmon species) at the cabin that was located at the upper end of

Eklutna Lake prior to the dams being built. Stories included a fish rack and smoking of salmon in quantities to bring back to the village.”

Also, the lake still supports landlocked dwarf sockeye “[kokanee](#)”, probably holding on from when the lake was connected to the river and Inlet, as there is no record of stocking. Page 23 of the lake habitat fish [report](#) commissioned by the Owners stated that “a total of 331 spawned-out kokanee were observed (at Eklutna Lake) during the survey period...(and) spawned kokanee ranged from 4.5 – 6.5 inches.” Kokanee would likely grow to normal sockeye size if allowed to develop in the ocean.

While the [Loso et al.](#) lake sediments study, cited by the Owners, “was unable to find any marine-derived nitrogen isotope in the annual sediment deposits at the bottom of the lake, going back to the 1850s, a simple test showed that with the lake's water volume and annual turnover the instruments were incapable of registering as many as 15,000 salmon/year. That's a lot of salmon for a lake that currently has none. Eklutna Lake is no Lake Clark, but there is no question that it would support salmon populations,” explained a co-author of the study. He also recently said that if someone sites it as evidence of no or few salmon in Eklutna Lake, they are doing so politically and not scientifically.

An NVE scientist explained that “20 years ago, an experienced ADFG Fish Biologist walked up the Eklutna mainstem above Thunderbird with him. It was very turbid and probably ~ 7cfs. He said fish could not survive in such high turbidity, then promptly proceeded to trap a perfectly healthy small trout. I observed many chum and some coho salmon spawning in that reach.”

Today, Eklutna Lake may not currently have enough phytoplankton to support the development of a thriving juvenile sockeye population. This is likely due to the deprivation of marine derived nutrients from returning salmon and the 80-foot varial dead zone due to hydropower draw downs. Excellent potential sockeye spawning habitat was found in that currently periodically dewatered varial zone around the lake (see paged 12-14 of the lake habitat [study](#)). Again, it's not just the lake, the upper tributaries also contain some of the best spawning and rearing habitat in the whole system.

Dr. Peter Westley at UAF recently said, “Salmon can recover quickly if given a chance.” With the proper freshwater habitat, there is reason for hope that the Eklutna watershed can once again become a salmon-producing region in Alaska.

If the salmon fishery is restored, will there be public access to fishing?

There is already public access to the lake and upstream tributaries in Chugach State Park, which includes the best potential spawning habitat for sockeye, Chinook, and coho, were access restored. Moreover, Eklutna, Inc., who owns most of the land around Eklutna River, said that they would allow public access for fishing once the fishery has recovered. The Native Village of Eklutna and other proponents of dam removal want to see a thriving fishery for all.

What are the other economic benefits of removing the dam?

It is important to think about the big picture of this issue. Increasing salmon habitat means increasing the number of salmon in the Upper Cook Inlet, reviving a fishery that has been decimated for almost a century. Recent studies have estimated the Upper Cook Inlet's sport and commercial fishing [economic value](#) at \$116 million and supporting 3,900 jobs.

More broadly, restoring the river enhances overall biodiversity and thus the watershed and ecosystem's health. This can bolster the area against harmful effects of climate change and other changing conditions. Additionally, research has demonstrated how highly people value healthy rivers and their fisheries and wildlife. Analyses have found that US households gain an average of \$80 a year in economic benefits from restoring a river of this size. Compare that to the rates that the owners want to scare us with. This figure does not include the salmon on your child's dinner plate in the future. Finally, land values in and around the watershed will increase greatly with a productive salmon stream.

Will dam removal affect recreation?

Eklutna Lake is a natural lake, so with the dam removed, it will continue to be a crowning jewel within the accessible parts of Chugach State Park. Except that right now, it is a salmon lake without salmon. As it exists now, the project owners manipulate lake levels far above and below natural lake levels. [High lake levels are eroding lakeside trails](#), including the trails that increase access for almost anyone to get into the mountains close to home. Low lake levels mean that we are dragging boats across mud and rocks in the summer and contending with sloped and cracked ice in the winter. And these low lake levels create 80-foot dead zones around the lake, in areas that should be thriving habitat. Dam removal will ensure the lake level behaves more naturally and sustainably for continued enjoyment.

Dam removal will also restore the river. This will increase opportunities for all river recreation including fishing and rafting. Fishing above upstream of the lake will improve dramatically with more anadromous species. With a river restored, more salmon and the marine nutrients they bring can replenish and revitalize the entire ecosystem. This will help wildlife, the forest, and the streams of the entire watershed, making it a healthier wilderness for us to enjoy.

Who does not agree with the draft plan?

[Native Village of Eklutna](#)

[Eklutna, Inc.](#)

[US Fish and Wildlife Service](#)

[NOAA National Marine Fisheries Service](#)

[Alaska Department of Fish and Game](#)

[Anchorage Assembly](#)

Who supports or supported full restoration of the Eklutna River?

[US Rep Don Young](#)

[US rep Mary Peltola](#)

[Alaska Federation of Natives](#)

[Eklutna Valley Community Council](#)

[MatSu Fish and Wildlife Commission](#)

[Birchwood Community Council](#)

Is there an opportunity for the public to weigh in?

The public comment period is open through February 19, 2024. Comments can be emailed to info@eklutnahydro.com or from [Home - Eklutna Hydro](#) at the bottom of the page. However, the process for public comment has been [woefully inadequate](#) up to this point. The Owners hosted 6 “public meetings” from January 16-18th. However, unlike a typical public comment meeting, they did not allow time for public testimony. Instead, they gave a presentation that left out important information and included slanted information, then encouraged people to submit comments in the back of the room. Across all 6 public meetings, only 17 out of 230 attendees submitted written comments. Many attendees were disappointed to not hear what others in the room thought. They had McMillen scientists and engineers available after the presentation to answer questions. However, there were no tables for other experts and parties to the 1991 agreement including NVE, US FWS or NMFS.