

# Anchorage Hydropower Utility



**Municipal  
Manager**

**Anchorage  
Hydropower**

## **Anchorage Hydropower Utility Organizational Overview**

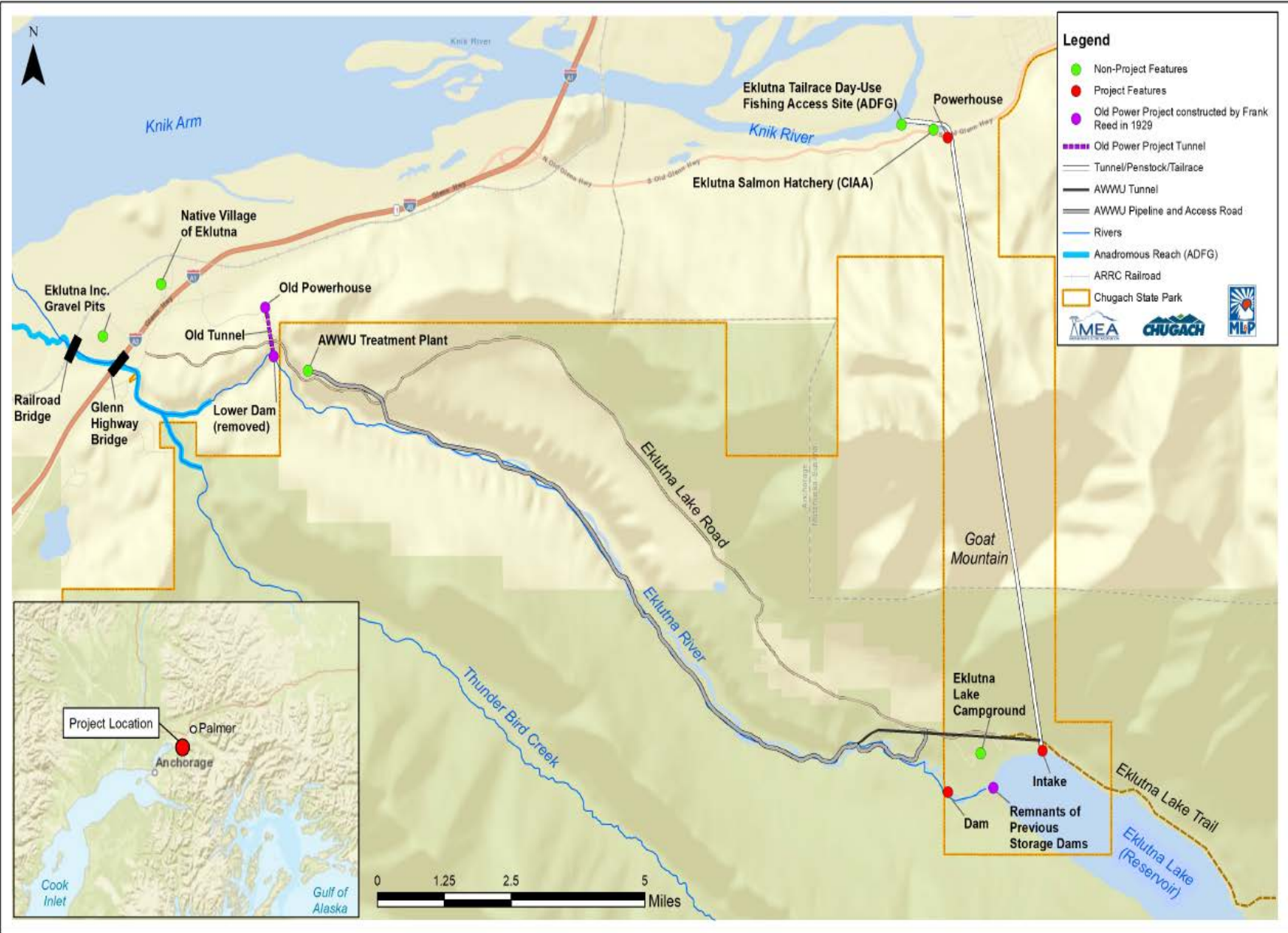
The Anchorage Hydropower Utility is an enterprise function of the Municipality of Anchorage (MOA).

The MOA sold Municipal Light & Power (ML&P) and with the closing of the sale transaction to Chugach Electric Association, Inc. (CEA), the nature of the electric service provided by the MOA will immediately convert from the provision of retail electric service to a significant portion of Anchorage, through generation, transmission, and distribution facilities, to the far more limited provision of wholesale generation service through long-term contracts with two utility customers. MOA's ownership interest in the generation assets of the Eklutna Hydroelectric Project ("Eklutna Project") will not be transferred to CEA and will be retained by the MOA, as the Anchorage Hydropower Utility.

Anchorage Hydropower Utility is located approximately 30 miles northeast of Anchorage on the Old Glenn Highway. MOA, CEA, and Matanuska Electric Association, Inc. (MEA) share the project costs through a proportionate share of ownership. Under separate power purchase agreements (PPAs), for a term of 35 years, CEA will purchase its proportionate share (64.29%) of ML&P's share, and MEA will purchase its proportionate share (35.71%), of the Eklutna output. Through these PPAs, CEA and MEA have agreed to purchase the entire output of the MOA's Eklutna Project ownership interest.



Visit the Eklutna Project website at: <https://www.eklutnahydro.com/background/>



## **Anchorage Hydropower Business Plan**

### **Mission**

Provide energy that is safe and reliable to meet purchase power agreement (PPA) requirements.

### **Services**

Anchorage Hydropower owns 53.33% of the generation assets of the Eklutna Hydroelectric Project. Anchorage Hydropower sells all its electric output to Chugach Electric Association (CEA) and Matanuska Electric Association (MEA) pursuant to PPAs. Anchorage Hydropower is currently subject to economic regulation by the Regulatory Commission of Alaska (RCA).

### **Business Goals**

- Provide electricity to satisfy the PPAs.
- Maintain \$3 million cash reserve in accordance with RCA Order U-19-020(39).
- Maintain 180 days of cash on hand to cover operating expenses.
- Maintain equity and earn net income at a level sufficient to continue to ensure the long-term financial stability of the utility.
- Operate the electrical system with optimum economic efficiency and strict adherence to environmental standards.

### **Strategies to Achieve Goals**

- Implement industry best practices and streamline business processes to ensure the financial and operational integrity of the utility.
- Contract with an individual with knowledge of the Railbelt generation and transmission system and prudent utility practice to advise on power plant operations.
- Work collaboratively as owners of the Eklutna Hydropower Project to implement predictive maintenance program to reduce or eliminate outages and interruptions

### **Performance Measures to Track Progress in Achieving Goals**

1. Maintain positive Net Income

## About Anchorage Hydropower Utility

### History

In 1929, the privately owned, Anchorage Power & Light Company (AP&L) began supplying electricity from a hydroelectric power plant on the Eklutna River, 30 miles northeast of Anchorage. In 1943, the city acquired the Eklutna plant from AP&L. In 1955, the U.S. Bureau of Reclamation completed construction of a new, larger plant on the Eklutna River. The city contracted for 16,000 kilowatts of generating capacity from that plant and “little” Eklutna was transferred to the federal government. In 1997, Municipal Light & Power (ML&P), Chugach Electric Association, Inc. (CEA), and Matanuska Electric Association, Inc. (MEA) jointly took ownership of the Eklutna Hydroelectric Plant. In 2020, through the sale of ML&P, the Municipality of Anchorage (MOA) retained its ownership interest in the generation assets of the Eklutna Hydroelectric Project (Eklutna Project). ML&P, CEA, and MEA each own an undivided interest in the Eklutna Project in the following percentages: ML&P, 53.33 percent; Chugach, 30 percent; and MEA, 16.67 percent.

### Services

The Eklutna Project has 40 megawatts of generation capacity and produces approximately 130,000 kilowatt-hours of electricity per year.

In 2018, the project produced 177,438 megawatt hours (MWh) of clean energy. This is enough energy to power more than 24,600 residential homes for an entire year. Eklutna hydroelectric power is the lowest cost renewable energy in Southcentral Alaska.

### Regulation

The utility is regulated by the Regulatory Commission of Alaska (RCA) and subject to abide by the rules and regulations in the utility’s tariff, if any, or in special contracts with customers.

Under sections 13.11(a) and 16.04.B. of the Anchorage Municipal Charter, the revenue received from CEA under the power purchase agreement must be distributed in the MOA Trust Fund. The new section 26.10.068 provides that revenue received from CEA must be distributed to the MOA Trust Fund. It also provides that additional revenue may be distributed to the general government budget, subject to the requirement that the utility maintain sufficient reserves to meet anticipated capital and operating expenses and as required by the RCA.

The RCA requires that the MOA maintain a reserve fund of not less than \$3,000,000 to support the MOA’s share of anticipated operations. If for any reason these reserves are not met, the utility is prohibited from paying a dividend to general government and depositing CEA’s payments to the trust.

### Physical Plant

The 40-megawatt (MW) Eklutna Project is in Southcentral Alaska approximately 30 miles northeast of downtown Anchorage near the Native Village of Eklutna. The U.S. Bureau of Reclamation (USBR) constructed the project in 1955, which included rehabilitation of an existing dam at the outlet of Eklutna Lake.

The rehabilitated dam was damaged in the 1964 earthquake, at which point a new and taller embankment dam was constructed just downstream. The new dam is an earth and rockfill structure 815 feet long and 41 feet high with a rectangular concrete spillway that runs through the dam. Eklutna Lake, approximately 7 miles long and 1 mile wide, is located within Chugach

State Park and provides almost 90 percent of the domestic water supply for the MOA. The intake structure for the Eklutna Project is located 36 feet below the natural lake level. From there, water is diverted north into a 4.6-mile-long tunnel through Goat Mountain and then into a 1,370-foot-long penstock before reaching the powerhouse located on Old Glenn Highway. The tailrace flows under the highway and then discharges into the Knik River. The powerhouse contains two generating units.

Visit the Eklutna Hydropower website at: <https://www.eklutnahydro.com/background/>

## Anchorage Hydropower Utility Highlights and Future Events

The 1991 Fish and Wildlife Agreement (Agreement) gives deadlines for specific milestones in the consultation, program development, and implementation processes. These deadlines, listed below, are all relative to the date on which ownership of the project was officially transferred from the federal government to the three local utilities (October 2, 1997). This date is referred to as the Transaction.

Before the Governor issues the final Fish and Wildlife Program, the Agreement requires the owners to develop study plans, conduct the necessary studies, prepare study reports, develop a draft Fish and Wildlife Program, engage the public, and to consult with agencies and interested parties multiple times throughout the process. In order to allow adequate time to meet these requirements, the owners have initiated the consultation process early.

- 2022 – Initiate the consultation process no later than 25 years after the transaction date
- 2024 – Issuance of the Final Program by the Governor at least 3 years prior to implementation
- 2027 – Begin implementation of the Program no later than 30 years after the transaction
- 2032 – Complete implementation of the Program no later than 35 years after the transaction

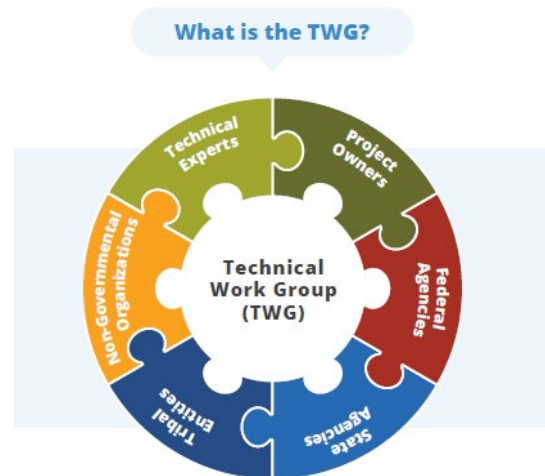


The planned schedule to provide the Governor with a Proposed Fish and Wildlife Program is shown below, with updates through Fall of 2021.

2019 – During the last week of August, the owners’ team conducted a site reconnaissance of the Eklutna River. The primary goal was to provide the project owners’ technical and regulatory staff with the chance to review and observe site conditions and project facilities. In addition, the site reconnaissance allowed technical staff to assess the potential scope of study efforts needed to provide the Governor and his/her staff with data to establish the Fish and Wildlife Program required by the 1991 Fish and Wildlife Agreement. For more information, please reference the trip report which can be found under Final Documents at: [Documents - Eklutna Hydro](#)

2020 – In June 2020, a Technical Work Group (TWG) was established for study planning purposes. The TWG consists of technical experts and representatives from the following entities:

- Native Village of Eklutna
- Alaska Department of Fish and Game
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service
- Trout Unlimited
- Alaska Pacific University
- Alaska Institute for Climate and Energy
- Hydropower Project Owners



Earlier in the year, the project owners acquired aerial imagery, spherical videography, and LiDAR of the entire Eklutna River as well as the northeastern shoreline of Eklutna Lake along the lakeside trail. The spherical videography is now available online at: <https://biglook360.com/eklutna/> Segments 1-7 show the river and lake shoreline going upstream at a higher altitude, while segments 8-14 are going downstream at a lower altitude. The imagery, videography, and LiDAR will be utilized during the ongoing study planning process this year and during subsequent study implementation.

In September 2020, the project owners' technical team held several meetings with the TWG to establish a study program framework. The project owners then developed Draft Study Plans and distributed them to the TWG on October 26, 2020 for review and comment. The comment deadline was November 25, 2020. A subsequent TWG meeting was held on November 30, 2020 to review the TWG's comments on the Draft Study Plans. The project owners continue to work with the TWG to address their comments and finalize the study plans by early 2021.

As of March 2021 – After receiving comments from the Technical Work Group (TWG) and others on the Draft Study Plans, the Project Owners held multiple meetings with the TWG in November and December 2020 to discuss their comments. The Project Owners then revised the study plans based on all comments received and distributed the Revised Draft Study Plans to the TWG on January 18, 2021 for a second round of review and comment. Another meeting with the TWG was held on January 25, 2021 to review the major revisions to the study plans and to answer any clarifying questions from the TWG before the comment deadline on January 29, 2021. The Project Owners revised the study plans again to address the second round of comments from the TWG, and then distributed the Proposed Final Study Plans to the Parties to the 1991 Fish and Wildlife Agreement on February 24, 2021 for review and concurrence. The Project Owners are currently working to obtain all necessary permits and authorizations for the planned summer field work season.

The project owners are happy to report that we have now received letters from all of the parties in the 1991 agreement officially concurring with the scope of work in the study plans. Following the process outlined by the state agencies, the concurrence letters from the four state agencies and the Proposed Final Study Plans were then sent to the Alaska Energy Authority (AEA) as the governor's representative for review. The AEA provided no additional comments, and the study plans were finalized in May 2021.

2021-2023 – Conduct studies as described in the study plans (assuming 2 years of studies), develop a draft Summary of Results, and distribute to stakeholders for review and comment.

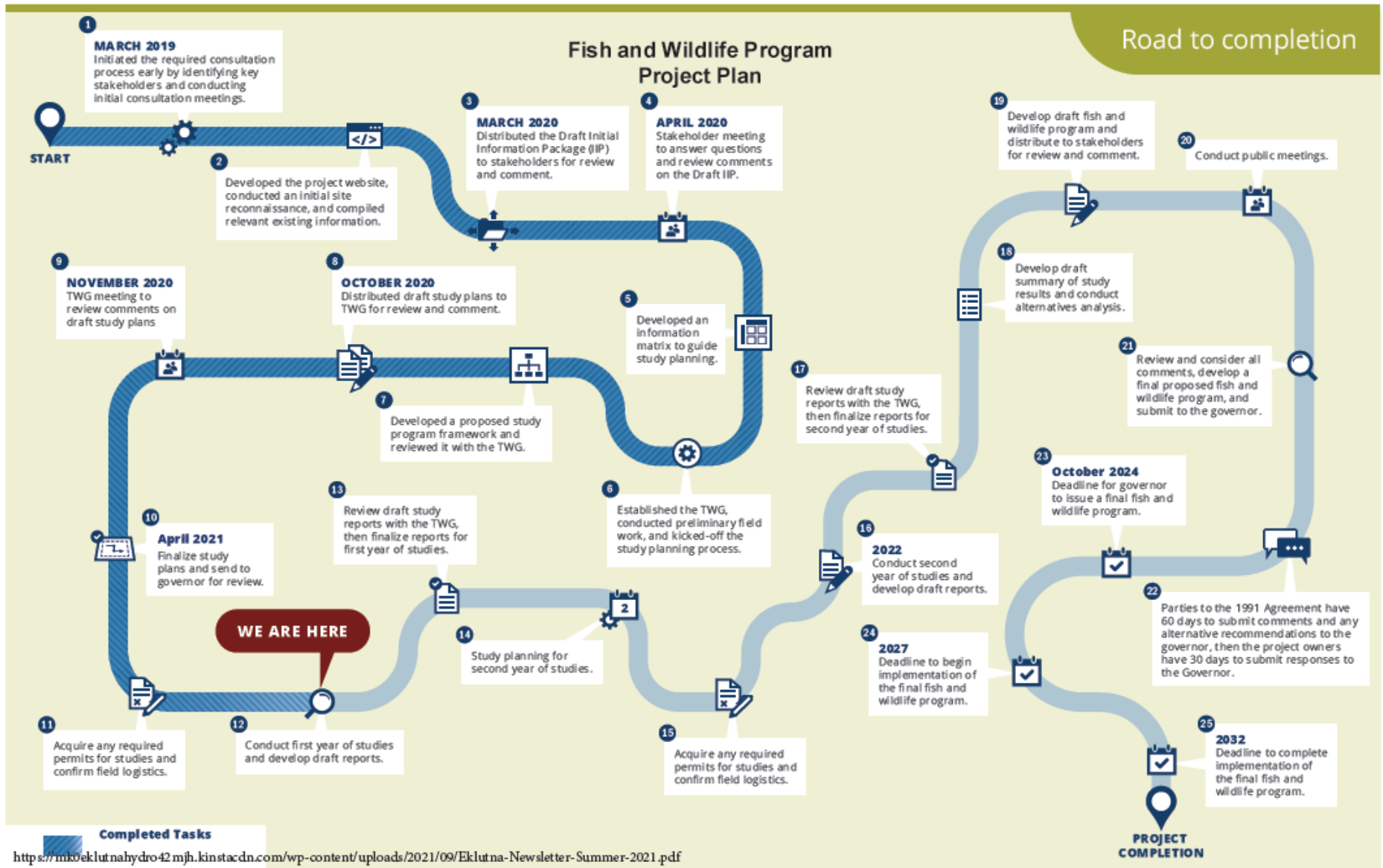
2023–2024 – Conduct public meetings, resolve any disagreements, and submit proposal to the Governor.

Check in on the progress at: <https://www.eklutnahydro.com/project-schedule/>

Source: Eklutna Hydro. Accessed September 28, 2021. <https://www.eklutnahydro.com/project-schedule/>,

Source: Eklutna Hydro. Accessed September 28, 2021. [Eklutna-Newsletter-Summer-2021.pdf \(kinstacdn.com\)](https://www.eklutnahydro.com/newsletter-summer-2021.pdf)





## **Anchorage Hydropower Utility External Impacts**

A Fish & Wildlife Agreement in 1991, with the United States Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), and the State of Alaska (the State) came to an agreement that requires the owners to:

- examine, and quantify if possible, the impacts to fish and wildlife from the Eklutna Hydroelectric Project
- examine proposals for the protection, mitigation and enhancement of fish and wildlife affected by the hydroelectric development
- consider the impacts of any protection, mitigation, or enhancement (PME) measures on other environmental resources and beneficial public uses as well as available means to mitigate those impacts
- develop and propose a Fish & Wildlife Program to the Governor.

The Governor will then review the proposal and issue a final Fish & Wildlife Program giving equal consideration to:

- the purposes of efficient and economical power production
- the protection, mitigation of damage to, and enhancement of fish and wildlife
- the protection of recreation opportunities
- municipal water supplies
- the preservation of other aspects of environmental quality
- other beneficial public uses
- requirements of State law

Throughout this process, the owners are required to consult with the USFWS, the NMFS, State resource agencies including the Alaska Department of Fish & Game (ADF&G), the Alaska Department of Environmental Conservation (ADEC), the Alaska Department of Natural Resources (ADNR), and any other interested parties. The USFWS, NMFS, and the State agreed that this process obviates the need for the owners to obtain a license for the project from the Federal Energy Regulatory Commission (FERC). The Native Village of Eklutna and Anchorage Water & Wastewater Utility are also included in the process.

Source: Eklutna Hydro. Accessed September 29, 2020. <https://www.eklutnahydro.com/background/>

## **Anchorage Hydropower Utility Capital Overview**

### **Capital Project Selection Process**

The Eklutna Operating Committee (EOC), of which the Municipality is a member, reviews engineering and operating reports, maintenance schedules, and other information about the condition of the generation assets of the Eklutna Power Project (the Project). The EOC develops a five-year capital plan, and develops and approves a current year capital project budget based on need, available resources, and schedule.

### **Significant Projects**

Fish & Wildlife Project – In compliance with the 1991 Fish and Wildlife Agreement between the Eklutna project owners, the Federal government, and the State of Alaska, Anchorage Hydropower is responsible to pay for 19.04% of the costs associated with developing and implementing a Fish & Wildlife Study Plan, designed to mitigate any effects of the hydroelectric activity of the Project on fish and wildlife in the area.

### **Impacts on Future Operating Budgets**

The entity must retain equity for the payment of capital projects in the future. The Municipality is responsible for 19.04% of the Eklutna generation capital expenditures and any future Fish & Wildlife project expenditures.

**Anchorage Hydropower Utility**  
**8 Year Summary**  
(\$ in thousands)

Financial Overview	2020 Actuals	2021	2022	2023	2024	2025	2026	2027
	*Unaudited	Proforma	Approved	Forecast				
Revenues	4,295	4,626	5,020	5,068	5,113	5,158	5,203	5,248
Expenses and Transfers <sup>(1)</sup>	63	3,517	4,112	4,161	4,210	4,259	4,308	4,357
<b>Net Income(Loss)</b>	<b>4,232</b>	<b>1,109</b>	<b>908</b>	<b>907</b>	<b>903</b>	<b>899</b>	<b>895</b>	<b>891</b>
Charges by/to Other Departments	-	32	36	37	38	39	40	41
Dividend to General Government	-	300	300	-	-	-	-	-
<b>Transfers to General Government <sup>(2)</sup></b>	<b>-</b>	<b>332</b>	<b>336</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>	<b>41</b>
Operating Cash	804	300	515	533	551	572	592	592
Construction Cash Pool	-	1,654	1,075	872	724	786	780	1,300
Restricted Cash	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
<b>Total Cash</b>	<b>3,804</b>	<b>4,954</b>	<b>4,590</b>	<b>4,405</b>	<b>4,275</b>	<b>4,358</b>	<b>4,372</b>	<b>4,892</b>
Net Position/Equity 12/31	12,185	13,294	14,202	14,237	14,416	14,529	14,644	14,235
<b>Capital Assets Beginning Balance</b>	<b>-</b>	<b>8,175</b>	<b>8,883</b>	<b>9,483</b>	<b>10,083</b>	<b>10,683</b>	<b>12,445</b>	<b>14,608</b>
Asset Additions Placed in Service	8,175	708	600	600	600	1,762	2,163	3,431
<b>Net Capital Assets (12/31)</b>	<b>8,175</b>	<b>8,883</b>	<b>9,483</b>	<b>10,083</b>	<b>10,683</b>	<b>12,445</b>	<b>14,608</b>	<b>18,039</b>
Equity Funding Available for Capital	-	-	600	600	600	1,762	2,163	3,431

<sup>(1)</sup> Expenses shown include all transfers to General Government and all non-cash items: depreciation (including depreciation on assets purchased with grant funds) and amortization activities.

<sup>(2)</sup> Included in total expenses calculated in Net Income.

**Anchorage Hydropower Utility  
Statement of Revenues and Expenses**

	2020 Actuals *Unaudited	2021 Proforma	\$ Change	2021 Revised	\$ Change	2022 Approved	22 v 21 % Change
<b>Operating Revenue</b>							
Wholesale Power Sales	680,761	1,764,371	317,718	2,082,089	300,000	2,382,089	14.41%
Chugach Revenues (AWWU Water Diversion)	-	322,118	(172,118)	150,000	(150,000)	-	-100.00%
<b>Total Operating Revenue</b>	<b>680,761</b>	<b>2,086,489</b>	<b>145,600</b>	<b>2,232,089</b>	<b>150,000</b>	<b>2,382,089</b>	<b>6.72%</b>
<b>Non Operating Revenue</b>							
Chugach Revenues	290,620	2,514,561	-	2,514,561	25,145	2,539,706	1.00%
Investment Income	3,323,962	24,828	73,172	98,000	-	98,000	0.00%
<b>Total Non Operating Revenue</b>	<b>3,614,581</b>	<b>2,539,389</b>	<b>73,172</b>	<b>2,612,561</b>	<b>25,145</b>	<b>2,637,706</b>	<b>0.96%</b>
<b>Total Revenue</b>	<b>4,295,343</b>	<b>4,625,877</b>	<b>218,772</b>	<b>4,844,650</b>	<b>175,145</b>	<b>5,019,795</b>	<b>3.62%</b>
<b>Operating Expense</b>							
Salaries and Benefits	-	-	118,222	118,222	58,532	176,754	49.51%
Overtime	-	-	-	-	-	-	0.00%
<b>Total Labor</b>	<b>-</b>	<b>-</b>	<b>118,222</b>	<b>118,222</b>	<b>58,532</b>	<b>176,754</b>	<b>49.51%</b>
Supplies	-	-	170,760	170,760	(170,760)	-	-100.00%
Travel	-	-	-	-	-	-	0.00%
Contractual/Other Services	25,072	167,374	(110,596)	56,778	170,760	227,538	300.75%
Contributions to Other Funds	-	2,805,180	(290,619)	2,514,561	625,145	3,139,706	24.86%
Dividend to General Government	-	300,000	-	300,000	-	300,000	0.00%
<b>Manageable Direct Cost Total</b>	<b>25,072</b>	<b>3,272,555</b>	<b>(230,456)</b>	<b>3,042,099</b>	<b>625,145</b>	<b>3,667,244</b>	<b>20.55%</b>
Municipal Enterprise/Utility Service Assessment	-	-	-	-	-	-	0.00%
Depreciation/Amortization	38,655	212,605	20,007	232,612	-	232,612	0.00%
<b>Non-Manageable Direct Cost Total</b>	<b>38,655</b>	<b>212,605</b>	<b>20,007</b>	<b>232,612</b>	<b>-</b>	<b>232,612</b>	<b>0.00%</b>
Charges by/to Other Departments	-	32,041	2,913	34,954	630	35,584	1.80%
<b>Total Operating Expense</b>	<b>63,727</b>	<b>3,517,201</b>	<b>(89,314)</b>	<b>3,427,887</b>	<b>684,307</b>	<b>4,112,194</b>	<b>19.96%</b>
<b>Total Expense</b>	<b>63,727</b>	<b>3,517,201</b>	<b>(89,314)</b>	<b>3,427,887</b>	<b>684,307</b>	<b>4,112,194</b>	<b>19.96%</b>
<b>Net Income (Loss)</b>	<b>4,231,616</b>	<b>1,108,676</b>	<b>308,087</b>	<b>1,416,763</b>	<b>(509,162)</b>	<b>907,601</b>	<b>-35.94%</b>
<b>Appropriation:</b>							
<b>Total Expense</b>		<b>3,517,201</b>	<b>(89,314)</b>	<b>3,427,887</b>	<b>684,307</b>	<b>4,112,194</b>	<b>19.96%</b>
Less: Non Cash Items							
Depreciation/Amortization		212,605	20,007	232,612	-	232,612	0.00%
Total Non-Cash		212,605	20,007	232,612	-	232,612	0.00%
<b>Amount to be Appropriated (Function Cost/Cash Expense)</b>		<b>3,304,596</b>	<b>(109,321)</b>	<b>3,195,275</b>	<b>684,307</b>	<b>3,879,582</b>	<b>21.42%</b>

## Anchorage Hydropower Utility Reconciliation from 2021 Revised Budget to 2022 Approved Budget

	Expenses	Positions		
		FT	PT	Temp/ Seas
<b>2021 Revised Budget (Appropriation)</b>	3,195,275	1	-	-
<b>Transfers by/to Other Departments</b>				
- Charges by Other Departments	630	-	-	-
<b>Changes in Existing Programs/Funding for 2022</b>				
- Salaries and Benefits Adjustments, EXE Range Approved	58,532	-	-	-
- Contributions to Municipal Trust	25,145	-	-	-
<b>2022 Continuation Level</b>	<b>3,279,582</b>	<b>1</b>	<b>-</b>	<b>-</b>
<b>2022 One-Time Requirements</b>				
<b>Transfers (to)/from Other Agencies</b>				
- Contributions to General Government	600,000	-	-	-
<b>2022 Approved Budget Changes</b>				
- Contractual Services	170,760	-	-	-
- Supplies	(170,760)	-	-	-
<b>2022 Approved Budget</b>	<b>3,879,582</b>	<b>1</b>	<b>-</b>	<b>-</b>
<b>2022 Budget Adjustment for Accounting Transactions (Appropriation)</b>				
- None	-	-	-	-
<b>2022 Approved Budget (Appropriation)</b>	<b>3,879,582</b>	<b>1</b>	<b>-</b>	<b>-</b>
	<b>2022 Approved FTE</b>			
	<b>1.0</b>	<b>1.0</b>	<b>-</b>	<b>-</b>

**Anchorage Hydropower Utility**  
**2022 Capital Improvement Budget**  
(\$ in thousands)

<b>Projects</b>	<b>Debt</b>	<b>State Grants</b>	<b>Federal Grants</b>	<b>Equity</b>	<b>Total</b>
Fish & Wildlife	-	-	-	600	600
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>600</b>	<b>600</b>

## Anchorage Hydropower Utility 2022 - 2027 Capital Improvement Program

(\$ in thousands)

Projects	Year	Debt	State Grants	Federal Grants	Equity	Total
Plant						
Fish & Wildlife	2022	-	-	-	600	600
	2023	-	-	-	480	480
	2024	-	-	-	480	480
	2025	-	-	-	480	480
	2026	-	-	-	480	480
			-	-	-	2,520
Generation	2023	-	-	-	261	261
	2024	-	-	-	280	280
	2025	-	-	-	300	300
	2026	-	-	-	300	300
			-	-	-	1,141
		-	-	-	1,141	1,141
	<b>Total</b>	-	-	-	<b>3,661</b>	<b>3,661</b>



**Fish & Wildlife**

**Project ID** 2021003 **Department** Anchorage Hydropower Utility  
**Project Type** New **Start Date** January 2021  
**District** **End Date**  
**Community Council**

**Description**

Fish and Wildlife costs are for the development of studies required by the agreement.

**Version** 2022 Approved

		2022	2023	2024	2025	2026	2027	Total
<b>Revenue Sources</b>	<b>Fund</b>							
Net Assets	531200 - Anchorage Hydropower CIP	600	480	480	480	480	-	2,520
<b>Total (\$ in thousands)</b>		<b>600</b>	<b>480</b>	<b>480</b>	<b>480</b>	<b>480</b>	<b>-</b>	<b>2,520</b>

**Generation**

**Project ID** 2021002 **Department** Anchorage Hydropower Utility  
**Project Type** Maintenance **Start Date** January 2021  
**District** **End Date**  
**Community Council**

**Description**

Turbine maintenance that is based on historical operating experience and in accordance with the manufacturers recommended maintenance schedule based on the number of hours a unit runs.

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**Version** 2022 Approved

		2022	2023	2024	2025	2026	2027	Total
<b>Revenue Sources</b>	<b>Fund</b>							
Net Assets	531200 - Anchorage Hydropower CIP	-	261	280	300	300	-	1,141
<b>Total (\$ in thousands)</b>		-	261	280	300	300	-	1,141