

ALASKA RURAL UTILITY COLLABORATIVE 2023 REPORT ON ACTIVITIES

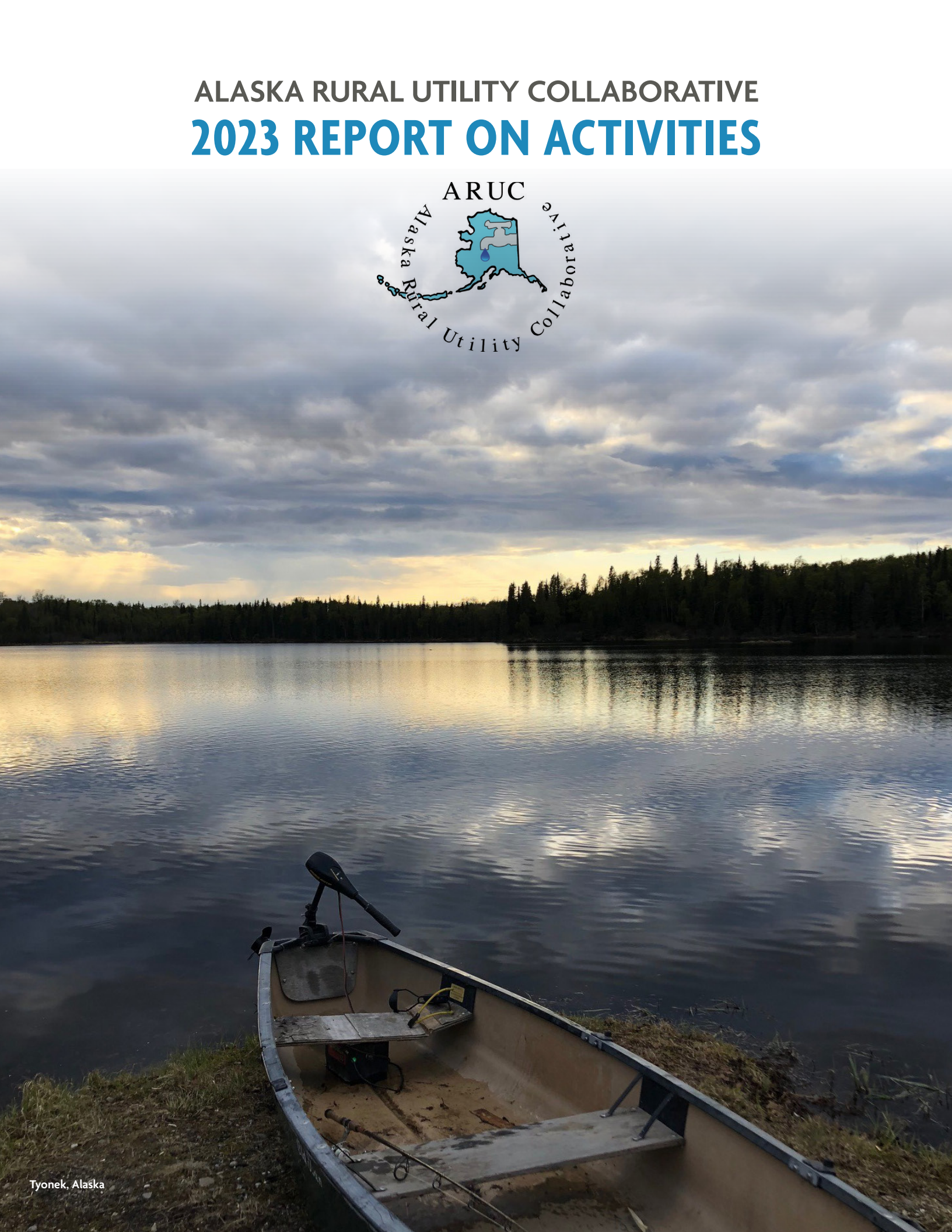
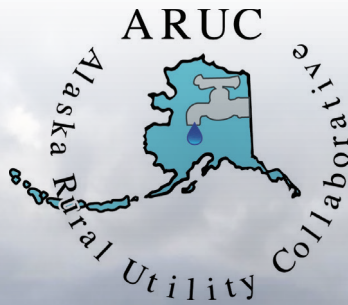


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ABOUT ARUC

The Alaska Rural Utility Collaborative (ARUC) is an Alaska Native Tribal Health Consortium (ANTHC) program created to assist and empower its member communities to manage, operate and maintain water and sewer systems in rural Alaska. Each member community's system is operated as a stand-alone, nonprofit business. Money from local customers, generated from user fees and local community and regional support, must be enough to pay the system's direct expenses and build a reserve account. ARUC services include helping set water and sewer rates in each community, billing local water and sewer customers, providing guidance to local water plant operators and more. Through active management and operations and maintenance support, ARUC strives to pursue its goals of maximizing the public health benefits of sanitation facilities and building local community capabilities. Through safe and reliable sanitation, ARUC focuses on preventive health services

- ▶ Ensuring qualified staff operate and maintain facilities to provide high-quality drinking water and safe disposal of sewage
- ▶ Providing emergency utility response.
- ▶ Extending the useful life of water and sanitation systems through preventive maintenance, thereby saving millions of federal, state and local dollars in replacement costs.
- ▶ Hiring and training water plant operators and backup staff in each community and offering good wages and benefits.
- ▶ Setting water/sewer customer rates with community council agreements: Each community's rates are set to be self-supporting and rates vary per community.
- ▶ Working with ANTHC engineers, operations and maintenance specialists, utility managers, and grant specialists to support the utility at no additional cost to customers.

- Billing Collection Rate: 106%
- Operator Retention Rate: 96%
- Percent of Communities with Fully Funded Reserves: 100%
- Percent of Communities that Meet Best Practice Scores: 85%



Pitkas Point, Alaska

Assisted Billing Program

To be eligible for full ARUC membership, a community must be a member of the assisted billing program for a minimum of one year. This program provides enrolled communities with water and sewer customer billing services. It was developed to provide financial consistency by maintaining a steady and accurate utility billing schedule and helping communities generate revenue. Fees are collected and refunded to the community (minus the monthly service fee).

ARUC Benefits

When ARUC communities do well financially (revenues are greater than expenses), their funds are placed into a cash reserve account. This savings account makes it possible for communities to quickly purchase replacement parts or bulk fuel or to fund emergency expenses and repairs. After ARUC communities meet the required reserve amount, these funds can be used for larger projects such as energy efficiency work or facility upgrades. As communities meet their reserve requirements, another benefit is utility rate which increases customer affordability.

ARUC Expansion

The Infrastructure Investment and Jobs Act (IIJA) of 2021, often referred to as the Bipartisan Infrastructure Law, is providing \$3.5 billion in funding to be distributed over a span of five years to provide water and sanitation infrastructure for Alaska Native and American Indian tribes nationwide. A portion of this funding will improve water and sanitation systems for numerous Alaska communities, including providing first service infrastructure projects for many communities that are currently unserved.

In response, ARUC is taking steps to expand its membership. Through the ARUC program's demonstrated success, 30 additional rural Alaska communities will have the foundation and support to build essential local leadership and operator capacity toward truly sustainable water and sanitation services.



ARUC Advisory Committee

The ARUC Advisory Committee serves a valuable role as the liaison between ARUC and participating communities. Each community selects a member to be on the ARUC Advisory Committee. The committee meets four times a year, once in person and three times via teleconference, to represent their communities and provide direction on water and sewer operations and rates.



The ARUC Advisory Committee met in Anchorage on April 20-21, 2023, to discuss financial updates, system operations, quorum-voting rules, as well as the selection of a new Chair and Vice Chair of the committee. Of the 26 ARUC communities, 22 attended, with another three attending via Zoom. Additionally, committee members in attendance met with their assigned project managers and regional manager teams to discuss details of community specific needs and ideas.

During the meeting, the committee adopted a new majority rule to effect program-wide changes. Previously, a quorum super-majority of three-fourths was required, but the new rule sets the requirement at 50 percent plus 1, thus making it easier to pass resolutions or directives. The change was unanimously endorsed by all 25 of the 26 ARUC communities that were present.

Since 2018, Jerilyn Kelly and Larson Hunter have been serving as the Chair and Vice Chair of the ARUC Advisory Committee. They have effectively coordinated meeting topics, dates, and attendance arrangements, culminating in the successful attainment of a quorum for the first time since the advent of the COVID-19 pandemic. As such, the committee was able to nominate and elect new leaders, with Larson Hunter from Scammon Bay moving to Chair and Carvel Zimin Jr. from South Naknek as Vice Chair.

2023 COMMUNITY MANAGEMENT ACCOMPLISHMENTS

ARUC partners with member communities to use a strength-in-numbers approach and assists with the management, operation and maintenance of each community's water and wastewater system so communities don't have to do it alone. Local community councils participate in utility rate decisions, discuss billing processes and collections, and develop roles for ARUC staff, operators, and community representatives.

ARUC engages with community leadership to understand financial and infrastructure challenges and make decisions together to ensure long-term system sustainability and provide reliable clean water and sanitation. We are honored to share a few of the many successful management initiatives implemented by community leadership to improve their community's finances, management and operations.

Operator Exchange Program Shares Knowledge, Increases Sustainability

Being an ARUC member allows access to the Operator Exchange Program. This initiative helps operators support other ARUC communities in implementing a range of water and sewer projects, and fosters collaboration and knowledge among members.

In August, operator Elinor Bantatua from Noorvik traveled to Kiana to help install water and sewer service lines for the Tribal office building. Kiana's operators gained experience installing the service lines under Elinor's supervision.

In October, three operators from two ARUC communities, Carlie George and Ralph Bell from Scammon Bay and Wilbur Tonuchuk from Kotlik, traveled to Goodnews Bay, another member community, to help install new water and sewer service line connections to homes there.



Operator exchange program participants, from left: Ralph Bell of Scammon Bay, Wilbur Tonuchuk of Kotlik and Carlie George of Scammon Bay

Saint Michael Upgrades Teacher Housing

Saint Michael self-funded \$48,845 to repair and upgrade the teacher housing duplex, which was experiencing freeze-ups. Two service lines, each about 50 feet in length, were repaired, and new vacuum valves and sumps were placed in each side of the duplex.

New Stuyahok Repairs Arctic Boxes

Local operators inspected homes and found that 25 needed repairs to their arctic boxes. Arctic boxes protect and insulate service line connections outside of the homes. Often, as homes settle, the boxes can pull away from the house or develop cracks or gaps. This exposes the connections to freezing temperatures. Using plywood and insulation, these repairs were funded using \$36,000 of the community's reserve funds.



New Stuyahok Arctic Box Repairs



Saint Michael Duplex Service Connection

Quinhagak Rebounds After Power Outage

In December 2023, Quinhagak experienced an extended stretch of extremely low temperatures coupled with wind gusts that caused power outages throughout the community for 48 hours. Quinhagak's water and sewer system is operated from two buildings; the backup generator in one of these buildings failed midway through the outage. Because of this, the water treatment plant's circulation pumps and heat tape were without power, causing numerous residential service line freeze-ups and one of Quinhagak's three water main lines to freeze.

Water plant operators brought large space heaters into the plant to ensure that no other components froze while they attempted to repair the generator. ARUC's engineering team provided technical assistance over the phone while gearing up to head out to the community. The local water plant operator team managed to avert a complete power failure across the community by alternating power between different sections of the town after the initial outage.

After power was restored, ARUC's engineering team arrived and collaborated with the Yukon Kuskokwim Health Corporation's Remote Maintenance Worker (RMW) program to introduce a Hotsy unit—a device designed to heat water as it is propelled through a jetter. This intervention, along with the assistance of two RMWs, facilitated the thawing of approximately 2,700 feet of frozen and obstructed pipes over two days. Efforts then focused on repairing damaged service lines, acquiring a new backup generator and other materials necessary for thaw recovery. These repairs were funded by the community at an approximate cost of \$100,000. This quick and comprehensive response not only lessened the effects of the initial crisis but ensured the recovery of service to the community's residents.

"I want to thank ARUC for stepping up and coming to our community during our crisis. If we weren't a part of ARUC it would have been a major challenge to get the help we needed." – Jerilyn Kelly, Quinhagak Mayor



Adolph Pleasant, Quinhagak water plant operator, at ARWA training

ARUC Earns the Harvard Honoring Nations Featured All-Star Award

Harvard's Honoring Nations program recognized the Alaska Rural Utility Collaborative with one of its highest awards in May 2023. Of the 42 nationwide applications submitted, nine programs were selected as 2023 All-Stars, and three of those nine as Featured All-Stars, including ARUC. The Harvard Honoring Nations is an award of the Harvard Kennedy School Project on Indigenous Governance and Development that "identifies, celebrates, and shares excellence in American Indian tribal governance. Applications are evaluated on the basis of a program's effectiveness, significance to sovereignty, cultural relevance, transferability, and sustainability."

This Harvard award recognizes the ARUC program's efforts in demonstrating utility sustainability and contributions to excellence in tribal governance. Over the next year, Harvard will work with ARUC to create a mini-documentary about the program to be shared nationwide throughout their many platforms.



ARUC Honoring Nations Award & Certificate

"Please extend our congratulations to your entire team. Your work and your leadership to support rural Alaskan communities to manage, operate, and maintain water and wastewater systems is exceptional and holds many lessons for tribal governments around the world," said Megan Minoka Hill, Director of the Honoring Nations program and the Harvard Kennedy School's Project on Indigenous Governance and Development.

American Rescue Plan Act

ARUC received funding from the American Rescue Plan Act to be applied toward customer accounts as a pre-payment for water and sewer services. This funding allowed communities to help customers by providing financial relief during the COVID-19 pandemic. Below are the ARUC member communities and the funding they received:

- ▶ Deering: \$44,384
- ▶ Goodnews Bay: \$89,589
- ▶ Kotlik: \$45,300
- ▶ Lower Kalskag: \$6,600
- ▶ Savoonga: \$144,000
- ▶ Sleetmute: \$108,000

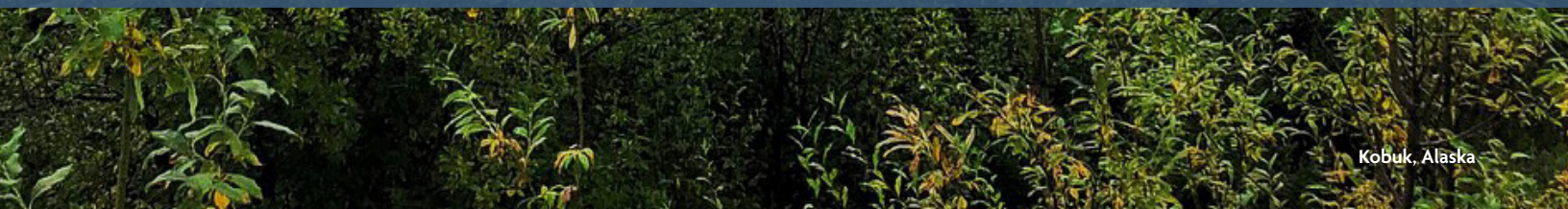


ARUC Engineering Goals:

ARUC engineering team and local operators work to achieve goals through several projects. ARUC partners with member communities to secure additional funding for necessary system repairs or upgrades, ensuring continuous safe service is provided to customers.

Engineering projects in ARUC communities focus on three major goals:

1. Reducing energy, fuel and operational costs.
2. Increasing the number of customers through service connection construction.
3. Providing operator guidance and assistance for issues that may arise during normal operation.



Kobuk, Alaska

2023 ENGINEERING ACCOMPLISHMENTS



Savoonga 60Hz Training

In 2023, the ARUC engineering team and local operators worked to achieve these goals through several projects. ARUC partners with member communities to secure additional funding for necessary system repairs or upgrades, ensuring continuous safe service is provided to customers.

Remote Monitoring Upgrades

Remote monitoring systems allow operators, community leadership, remote maintenance workers and the ARUC operations team to observe numerous measurements that affect water plant operations, such as changes in water temperature, levels, and flow rate. Remote monitoring has proven to be invaluable in protecting water and sanitation utilities from major disasters and costly repairs.

The Helmsley Charitable Trust provided about \$1.5 million to Engineering Ministries International in 2022 to upgrade remote monitoring systems in Alaska. The following ARUC communities received upgraded systems in 2023:

- ▶ Holy Cross
- ▶ Kotlik
- ▶ South Naknek
- ▶ Tyonek

“There’s regional managers that live close to the village, they act right away if there’s contaminants in the water. It’s like overnight, they call us and give us a boil-water notice. Then they send someone out, let us know what’s going on, steps to take next, that part is a big plus.” - A. Housler, Russian Mission

The upgraded remote monitoring systems provide a longer sensor range that allows more buildings to be monitored. The upgrades have also improved system reliability and connectivity to ensure data is updated in a timely manner so that emergencies can be identified and resolved.

Saint Michael and Savoonga

The Norton Sound Economic Development Corporation provided \$880,000 for Saint Michael and \$995,000 for Savoonga to implement various improvements within both community's water and wastewater infrastructure.

- New heat exchangers, pumps, and controls were purchased.
(The heat exchangers were no longer functioning at acceptable capacity and needed replacement.)
- New pumps and controls were installed to decrease energy usage and ensure efficient operation of the system.
- New vacuum valves were purchased, this allow customers' wastewater to enter the utility system and are an essential component of vacuum sewer operation.
- Arctic box repairs were carried out by local operators.
- In 2023, roughly 1,000 feet of utilidor was leveled in Saint Michael.

Both communities operate utilidor systems, which means the pipes and lines all operate above ground. These systems are vulnerable to ground movement caused by freezing and thawing permafrost, which can damage the piping. The utilidors require annual leveling and repair.

Scammon Bay

The IHS provided \$120,000 to install water and wastewater service to one home in Scammon Bay. Each new service line extends access to essential water and wastewater services while also helping communities keep their rates lower and adds another paying customer to the system.



Saint Michael Utilidor Leveling

"I love ARUC, Savoonga loves ARUC, they really do! At first it was kinda leery, everything new that you get exposed to, you want to stand back a little bit to see if it's going to be okay. But since we've been with ARUC, for a while, it really makes everything more healthier for our people with running water and sewer. If we have a problem, we can talk to them on the phone. And because they've been to my village, they know exactly what I'm talking about, where it is, where the problem is." - J. Iya, Savoonga



Savoonga, Alaska

Operator Training

The Alaska Rural Water Association (ARWA) funded \$46,570 to provide on-site training in Ambler, Deering, Kiana, Lower Kalskag, Pitka's Point, Quinhagak, Shungnak, and Tyonek. The training encompassed a wide range of subjects, including operations and maintenance support, emergency response planning, financial and managerial expertise, sanitary survey support, and source water preservation.

The U.S. Department of Agriculture's Rural Development program awarded it's Training and Technical Assistance grant to ARUC member communities, making additional operator training opportunities available.

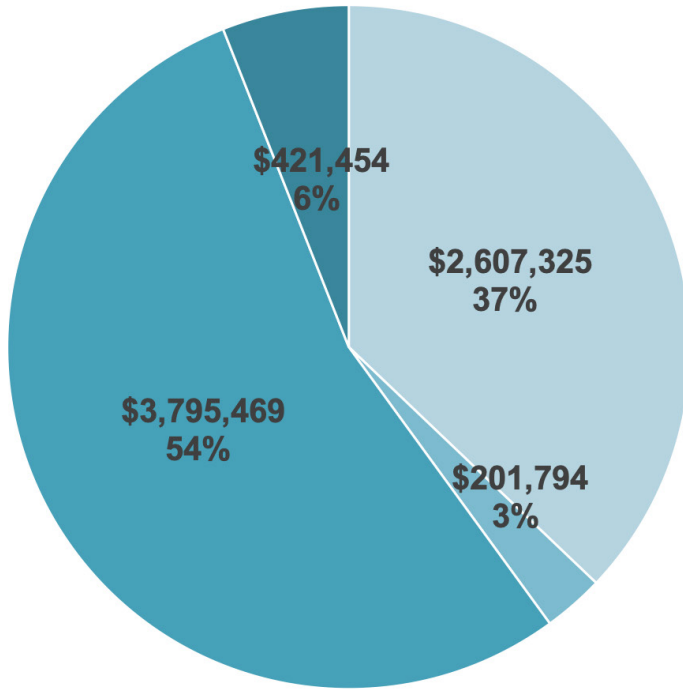
Together, ARUC engineers, utility management specialists, and regional remote maintenance workers provided on-site technical assistance to local water plant operators in the following 23 ARUC communities:

- ▶ Ambler
- ▶ Chevak
- ▶ Chignik Lake
- ▶ Deering
- ▶ Golovin
- ▶ Goodnews Bay
- ▶ Kiana
- ▶ Kobuk
- ▶ Kotlik
- ▶ Lower Kalskag
- ▶ Newhalen
- ▶ New Stuyahok
- ▶ Pitka's Point
- ▶ Quinhagak
- ▶ Russian Mission
- ▶ Saint Michael
- ▶ Savoonga
- ▶ Scammon Bay
- ▶ Shungnak
- ▶ South Naknek
- ▶ Toksook Bay
- ▶ Tyonek
- ▶ Upper Kalskag

In addition to these on-site training opportunities, utility management specialists scheduled off-site and virtual training for water plant operators. In FY23, 69 operators from 24 communities took part in a variety of off-site and virtual training activities:

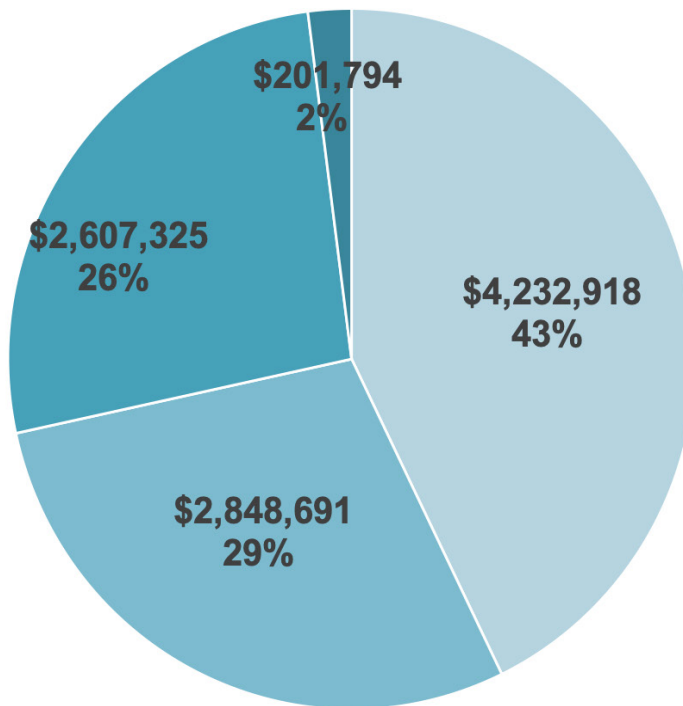
- ▶ ARWA 24th Annual Training Conference, Anchorage, October 2022
- ▶ ANTHC Small Water Systems, Virtual, October 2022
- ▶ YKHC Small Water Systems, Bethel, November 2022
- ▶ ANTHC Water Treatment Level 1, Virtual, December 22
- ▶ ANTHC Water Treatment Level 2, Anchorage, January 2023
- ▶ YKHC Water Treatment Level 1, Bethel, January 2023
- ▶ Wastewater Level 1, Kotzebue, February 2023
- ▶ ANTHC Wastewater Lagoon, Virtual, February 2023
- ▶ ANTHC Wastewater, Virtual, February 2023
- ▶ ARWA Intro to Wastewater and Collections, Virtual, February 2023
- ▶ YKHC Electric Controls 1, Bethel, March 2023
- ▶ YKHC Water Treatment Level 1, Virtual, April 2023
- ▶ YKHC Small Treated Water Systems, Virtual, April 2023
- ▶ YKHC Plumbing and Pipefitting for Operators, Virtual, April 2023
- ▶ AWWMA Conference, Anchorage, May 2023
- ▶ YKHC Boiler Maintenance and Repair, Bethel, May 2023
- ▶ ANTHC Small Water Systems, Virtual, July 2023
- ▶ YKHC Small Treated Water Systems, Bethel, September 2023

FINANCIALS



ARUC FY 23 OPERATING COSTS

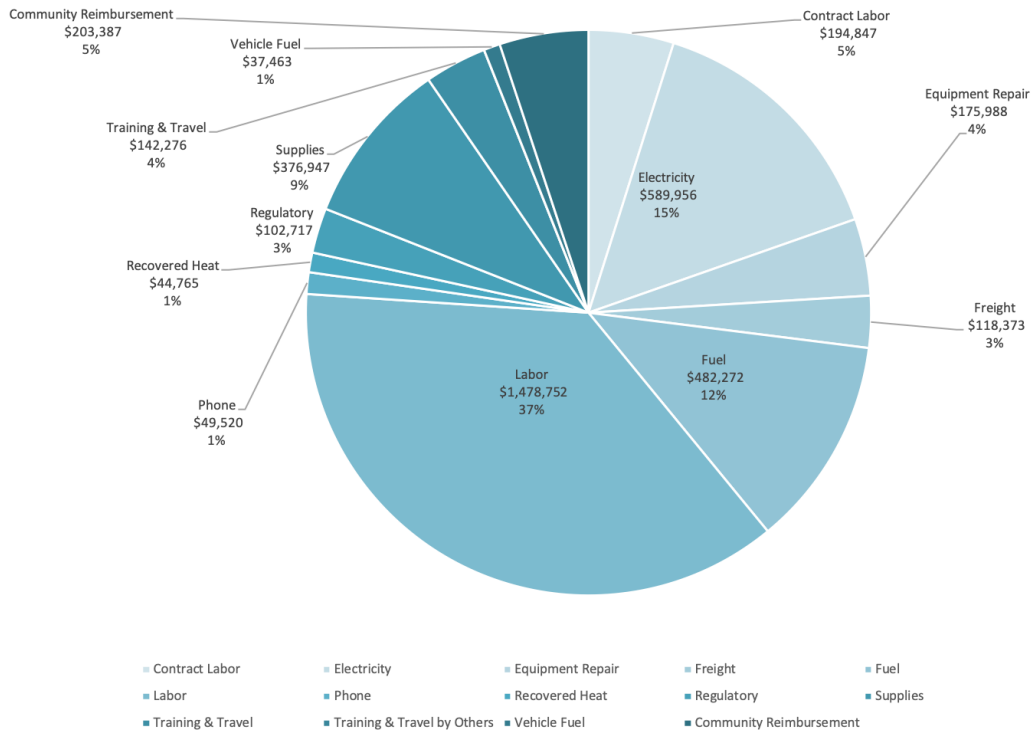
- ARUC Management Costs Paid by Others
- Billing Costs Paid By Community
- Community Operating Costs Paid by Users Only
- Community Funded Projects Paid by Users



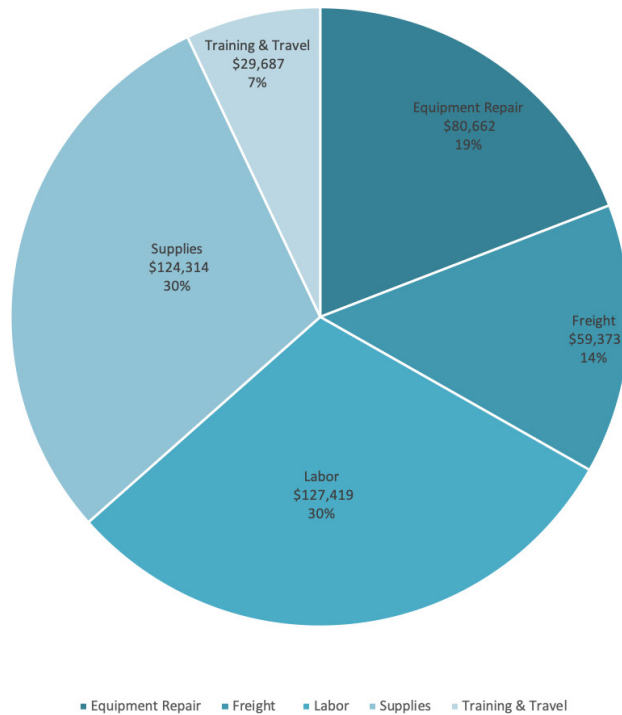
ARUC FY 23 OPERATING REVENUE

- Community Operating Revenue (paid by community)
- Construction Projects
- Management Costs Paid by Others
- Billing Program (paid by community)

FY 23 ARUC OPERATIONS PAID BY USER FEES



FY 23 COMMUNITY FUNDED PROJECTS FROM RESERVES



QUYANA/TAIKUU TO OUR PARTNERS

Alaska Energy Authority	City of Quinhagak	Northwest Arctic Borough
Alaska Rural Water Association	City of Russian Mission	Northwest Arctic Borough School District
Alaska Vocational Technical Center	City of St. Michael	Norton Sound Health Corporation
Bristol Bay Area Health Corporation	City of Savoonga	Norton Sound Economic Development Corporation
Bristol Bay Borough	City of Scammon Bay	Pitka's Point Village Council
Chignik Lake Traditional Village Council	City of Shungnak	Rural Community Assistance Corporation
City of Ambler	City of Toksook Bay	Sleetmute Traditional Council
City of Chevak	City of Upper Kalskag	State of Alaska Department of Environmental Conservation
City of Deering	Engineering Ministries International	State of Alaska Division of Community and Regional Affairs
City of Golovin	Helmsley Charitable Trust	State of Alaska Remote Maintenance Worker Program
City of Holy Cross	Indian Health Service	State of Alaska Village Safe Water Program
City of Kiana	Lake and Peninsula Borough	U.S. Department of Agriculture
City of Kobuk	Maniilaq Association	Yukon-Kuskokwim Health Corporation
City of Kotlik	NANA Regional Corporation	
City of Lower Kalskag	National Tribal Water Center	
City of New Stuyahok	Native Village of Goodnews Bay	
City of Newhalen	Native Village of South Naknek	
City of Noorvik	Native Village of Tyonek	

CONTACT ARUC

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Alaska Rural Utility Collaborative - Program of the Alaska Native Tribal Health Consortium

