



# Healthy facilities, Healthy communities

The Alaska Native Tribal Health Consortium (ANTHC) has spent 15 years bringing clean water and sanitation solutions to rural communities across Alaska, which has dramatically improved the health of the Alaska Native people in all regions of our state.

ANTHC's Alaska Rural Utility Collaborative (ARUC) also partners with communities to manage, operate and maintain the rural water and sewer systems so that this critical infrastructure can stay healthy, too.

ARUC works to protect the public investment by providing good drinking water every day and prolonging the life of each water system. To achieve that goal, ARUC empowers communities to maximize the operation and maintenance of their water and sewer systems while also maximizing their resources. ARUC team members and community partners also constantly work to make systems as efficient and cost-effective as possible. ARUC offers services that range from helping set water

and sewer rates in each community and billing local water customers; providing supervision to local water plant operators and paying system expenses like labor, parts, fuel and more; and even installing innovative energy efficiency upgrades.

Every Alaska region and community is unique, which is why ARUC treats each community's system as a stand-alone non-profit business. Money from local customers must be enough to pay the system's expenses and ARUC provides the services, support and expertise to ensure that happens.

## POSITIVE ENERGY

ARUC innovations lead to energy savings across Alaska. See [Page 2](#)

## SUCCESS STORIES

Communities and water systems around Alaska have benefited in many ways from partnering with ARUC. See [Page 3](#)

## STRENGTH IN NUMBERS

The more communities that join ARUC, the more savings, support and efficiencies are offered to members. See [Page 4](#)



# POSITIVE ENERGY

It takes a lot of energy to keep water in a liquid state at 60 below, which is one of the many reasons why water and sewer systems in Alaska use much more energy than conventional systems in the Lower 48. In fact, heating fuel and electricity make up nearly 40 percent of ARUC village water and sewer expenses.



**~40%**

of ARUC village water and sewer expenses are heating fuel and electricity

The ARUC and partner communities understand that energy efficiency is critical to rural water and sewer system sustainability and affordability for local residents. That work comes in many forms, from recovered heat projects, electrical energy efficiency projects, wind turbines, biomass boilers and much more.

Many ARUC communities like Deering, Goodnews Bay, Kotlik, Toksook Bay and Kiana have begun to implement energy efficiency projects in the past year. Although the efforts are new, these communities are already reporting significant energy savings. ARUC will order 21,000 gallons less heating fuel, saving \$85,000 in 2013 compared to 2012 as a result of efficiency efforts. ARUC expects similar electrical savings, as well.



**21,000** gallons  
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Funded recovered heat projects scheduled for 2013 and 2014 will save tens of thousands of gallons additional fuel. In fact, recovered heat projects recently funded by Alaska Energy Authority Renewable Energy Fund could save an additional 50,000 gallons of fuel per year in three villages: Quinhagak, Savoonga and Noorvik.



Save an additional  
**50,000**  
gallons of fuel

Quinhagak, AK



Deering water plant operator Fletcher Gregg installs energy efficiency upgrades on the oil-fired boiler in the community's water plant and washeteria.



Water plant operator Bruce Barr prepares a copper pipe for sweating to a recovered heat pump in Deering.



Bruce Barr installs brass and copper fittings to a recovered heat pump.

## ARUC SUCCESS STORIES: DEERING, AK

As part of a recent ARUC startup in Deering, teams launched an energy efficiency project that instantly helped the community save fuel and money each month. ARUC staff assessed the community's old water and vacuum sewer plants while also noting problems in the washeteria and power plant. The team found a series of opportunities and developed a plan with local operators to accomplish a list of repairs.

ARUC partnered with the local power utility and installed new thermostatic controls to optimize the benefit of new pumps and controls inside the water plant. This effort joined rehabilitation and tuning of the water plant boilers that also serve the community's popular washeteria. Dryer maintenance and air balancing rounded out the upgrades, which dramatically reduced the cost to operate all three facilities.

Following upgrades, Deering saved up to \$150 per winter month per household. ARUC's long-term impact of the work will help keep rates low. ARUC is working to reduce electrical use and promote operational efficiency, increase savings, and improve sustainability in ARUC-managed facilities.